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JOURNAL
OF THE
MILITARY SERVICE
INSTITUTION

OF THE
UNITED STATES

VOLUME XLVII.



BY DIRECTION OF THE PUBLICATION COMMITTEE.

BRIG.-GEN. T. F. RODENBOUGH, U. S. A., EDITOR.

MILITARY SERVICE INSTITUTION
GOVERNORS' ISLAND

1910

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JOURNAL
OF
THE MILITARY SERVICE INSTITUTION
OF THE
UNITED STATES.

"I cannot help plead to my countrymen, at every opportunity, to cherish all that is manly and noble in the military profession, because Peace is enervating and no man is wise enough to foretell when soldiers may be in demand again."—GENERAL SHERMAN.

Vol. XLVII.

JULY-AUGUST, 1910.

No. CLXVI.

Reeve Memorial Prize

WHAT MEASURES TAKEN IN TIME OF PEACE WILL
SECURE THE BEST RESULTS IN TIME OF WAR
THROUGH JOINT ACTION OF THE ARMY AND
NAVY?

BY FIRST LIEUTENANT PAUL D. BUNKER, UNITED STATES ARMY,
COAST ARTILLERY CORPS.



CO-OPERATION is the soul of modern life. No one party or state is sufficient unto itself, but must have its weaknesses made good from some outside source. For instance, Minneapolis makes flour and exchanges it with Lynn for shoes; Boston produces beans—and trades off enough of them with Chicago to insure the proper addendum to her Saturday night meal. In every direction we see alliances formed for the common good.

Let us see to what extent this tendency has communicated itself to the two branches of the nation's defense. That it should be much in evidence here is apparent to the most ignorant observer. Upon the army and the navy devolve the task of protecting the nation from all its enemies, and how can this work be done efficiently if all parts of the machine are not accurately co-ordinated? If any proofs of the value of co-operation were needed, the history of any war would afford examples enough, examples showing disastrous results where the two arms have failed to operate smoothly together, and illustrations of the brilliant successes due to a skilful ob-

servance of the principles of co-operation. It is not our intention or desire to marshal to our aid an array of these numerous occasions, for they are not needed; the simple fact that the army and the navy *must* co-operate is being more fully realized every day, and we are now devising schemes so that they *shall* do so.

WHAT CO-OPERATION MEANS.

To co-operate, people must "act or operate conjointly toward a common end." In this particular case the army and the navy must work together to defeat the common enemy. In order to see clearly how this "team work" occurs, let us assume that war is declared with one of the first-class powers. Our fleet immediately sets out to get command of the sea, thus forming the First Line of the national defense. This leaves the Coast Artillery, with its reserves and supports, and the naval districts as the Second Line, behind which is stationed the mobile army. The latter, of course, is not concentrated in one place, on account of the long line of seacoast to be protected, but is divided among several camps along the coast at such points as afford best railroad and other facilities. The basic idea is that if the enemy succeeds in eluding our fleet and in gaining a foothold upon our coast, a certain number of men could immediately be placed in front of him from the nearest camp, and this force should be sufficient to delay the advance of the invader until the remainder of our field-army could be concentrated in his path. Meanwhile the navy would return and make a determined attack upon the enemy's line of communications, which, if successful, would render the ultimate defeat of the enemy merely a matter of time.

In any war, if our fleet succeeds in securing command of the sea, and further operations are necessary, they would probably take the form of an over-seas expedition in army transports convoyed by the navy. After the expedition had landed at its objective, the defense of its lines of communication would be left in the hands of the navy, but the command of the land forces would devolve upon the army.

On the other hand, if our navy should be defeated it would have to retire behind the guns of our seacoast forts, to refit in order to give battle again at the first opportunity. In case of an enemy's expedition approaching our coast, the closest co-operation must exist between the Coast Artillery and the personnel of the Coast Patrols and Coast Defense Divisions of the naval districts.

Thus it is seen that no matter what course the operations of war may take, perfect co-ordination between the army and the navy must obtain in order to permit a capable defense or an efficient prosecution of the war.

WHAT HAS BEEN DONE?

1. Regulations have long prescribed certain official intercourse between the two services. For example, when a ship anchors off a fort certain calls must be made and returned. The propriety of this institution does not permit of remark, but its utility in promoting real co-operation is at least open to question. Those of us who are stationed near a naval station are more favorably situated in this respect.

2. Target practice. Endeavors are being made to have the navy witness Coast Artillery target practice, *i. e.*, the navy is given due notice of all approaching practices and is "cordially invited to attend." This is a one-sided benefit at best, although it probably is acceptable to the navy as a matter of professional education. In any case, how much is the cause of co-operation advanced by the process? Is target practice, *per se*, the sort of thing best calculated to secure joint action in time of war?

3. Combined maneuvers. Up to date this is one of the best methods of securing co-operation between the two services that has been tried. There are several disadvantages in the matter, the principal one of which is the expense involved. This fact, in connection with the limited appropriations available, have restricted greatly our use of this method of education. Another point in which our maneuvers could be improved lies in developing the element of uncertainty. In actual war uncertainty as to the exact objective of the enemy would be extremely conspicuous at times, and any decision we reached relative thereto would be in the nature of scientific guesswork. This element of doubt should enter to a greater extent into our exercises. In the scheme to be set forth hereafter it is believed that not only is the maximum of benefit obtained at the minimum of cost, but also the element of uncertainty is developed to its highest point.

Maneuvers sometimes tend to degenerate into "sham battles." They should usually simulate war conditions as nearly as possible. We use the word "usually" advisedly, for there are cases where, if war conditions were followed too closely, little if any benefit would be derived by the personnel involved. For

example, during the Portland exercises of 1903, on one occasion the fleet sailed boldly across the front of the batteries and made a double turn at about mid-range from most of the forts. In actual war this would have been suicidal, but in this particular case it was of great benefit to the men (at least on shore) as they were thus given a superb opportunity for a battle command drill, with all its adjuncts.

In such maneuvers there should be no such rule as declaring a ship permanently out of action if she had been put *hors de combat* in one phase. A phase should end with its attack, and if a ship or battery has been "put out" in one phase, it should be allowed to come in on the next attack. If this is not done a two-fold evil ensues: 1st. The commanders will become too timid and cautious, and will not dare take any chances with their ships for fear of losing everything at the start. This will result in but little practice being given to the personnel concerned. 2d. If a ship or battery is permanently put out of action the personnel thereof become merely spectators and lose much of the benefit of the succeeding phases. 4. The army and navy joint board. In the mind of the average line officer any definite knowledge of the results obtained by this board is, to use a hackneyed expression, conspicuous by its absence. The fruit of its deliberations, being for the most part "confidential," is not widely published, and ordinarily can be consulted only with comparative difficulty.

This Board has finished one of the most important things that it could possibly accomplish. We refer to the regulations governing naval convoy of military expeditions. These regulations are briefly set forth in the JOURNAL MILITARY SERVICE INSTITUTION, March-April, 1910, pp. 318, *et seq.*, and in them the division of authority in over-seas expeditions is clearly marked, showing where the naval authorities reign supreme, where the army commander has full sway, and also what matters are to be settled by consultation.

The above shows approximately what we have done. There are other things that have been accomplished, but they are not known to the services at large. What we have done and are doing shows that we are moving forward, but thus far we have progressed but little toward the goal. We have gained but a minute fraction of the inestimable benefits accruing from a complete understanding between the army and the navy.

BEARING OF PROBLEM ON THE DIFFERENT ARMS OF THE SERVICE.

In any scheme for securing co-operation (except very general ones) it would be hardly possible to include the whole army and navy in the course of instruction from the very first. Better results would be obtained by taking a small part, thoroughly instructing them along the lines laid down hereafter, and then letting these men make way for others. Hence it is necessary that instruction be given first to that part of the army that is most closely allied to the navy, i. e., that part which would receive the greatest benefit from co-operation.

For the reasons stated below, it is believed that this rôle belongs indubitably to the Coast Artillery. The other branches of the army have but little in common with the navy until the latter has gained sea supremacy and we are projecting over-sea expeditions, whereas the Coast Artillery must *always* keep in close touch with the navy. Our reasons for the above statement are:

1. The navy, forming the First Line of Defense, and the Coast Artillery with its reserves, supports, etc., together with the naval districts forming the Second Line, from the very nature of their duties must always keep in very close touch.

2. The navy and the Coast Artillery are always more or less together as a result of their respective stations, some of the forts having the proximity of a navy yard as their sole reason for existence.

3. The Coast Artillery, being trained for infantry duty, can be used as an expeditionary force. This fact seems to have been more or less overlooked. For example, suppose that trouble breaks out in one of the turbulent countries to the south of us. It would be much quicker, easier and more economical if the occasion demanded it, to steam into one of our harbors, and picking up a battalion of Coast Artillery rush them to the seat of disturbance than to wait a week for a similar number of infantry to arrive from the interior of the country by means of delayed troop trains. Although the old adage concerning the shoemaker and his last has lost none of its force in recent years, and many will insist on having infantry to do infantry work, yet it must be remembered that in many cases it is *time* that counts, and that a company of Coast Artillery arriving promptly

ARMY-NAVY JOINT ACTION.

might do more good than a crack regiment of infantry that arrived a week later.

4. Due to their stations and duties in connection with mining, etc., most of the Coast Artillery troops are better qualified to take care of themselves as a landing party. While they are far from expert seamen, nevertheless a man who knows an oar from a boat-hook is more valuable in such cases than one who does not.

5. In case the navy is defeated in a sea fight, it is upon the Coast Artillery that the defense of the fleet devolves while the latter is repairing damages.

Thus it is seen that logically the Coast Artillery is the first part of the army to be brought into close co-operation with the navy. However, in case large expeditionary forces are projected, the aid of the infantry would be essential to success. Hence the latter is the next arm to be considered in any scheme for bringing about close co-operation with the navy.

HOW TO SECURE CO-OPERATION.

1. *Army and Navy School.* Ordinarily it would be with hesitancy that we should suggest adding another school to the list that we already have. Many say even now that we are "over-educated." But the further we look into this problem the clearer and more urgent seems the need for this particular school. It is the keynote of the writer's scheme for securing not only co-operation between the two services, but also for increasing the practical ability of our officers and men, and to school them in the actual experiences they must expect in time of war.

Let the name of this school be what it may, "The School of Coast Defence" might more clearly describe what the writer would make it. This school must be located on the coast, preferably near both a navy yard and a large fort. Fort Monroe would make an ideal site for the school, but would necessitate an enlargement of the Post.

Personnel. As regards the faculty of this school, the writer would suggest putting the latter under the control of the Joint Board, who logically would best be fitted to outline the policy of the school and the details of its management, instruction, etc.

The student body should be selected from the line of both services, captains of the army and senior lieutenants and

lieutenant commanders of the navy. In view of what has previously been said concerning the several arms of the service, it would seem equitable to apportion the number of students as follows: Navy one third, Coast Artillery one third and the remaining one third to be filled from the rest of the army, principally from the infantry. Student officers detailed from the Coast Artillery should invariably be graduates of the Coast Artillery School.

Matériel. At least one battleship or armored cruiser should be attached permanently to the school. This would be no hardship, considering the present policy of keeping several ships out of commission. From time to time, as the school course might require, submarines, destroyers, etc., should be attached for the practical part of the course.

Curriculum. As a tentative scheme the writer submits the following:

(a) Theoretical Work.

(To be completed at Fort Monroe)

1. Study of modern ships and their characteristics, especially those having a bearing on the strategical use of same.
2. Critical study of modern seacoast fortifications at home and abroad, with special regard to diagnosing their weaknesses and best modes of attack.
3. Study of the oversea expeditions of the past, with analysis of causes of failure and success.
4. Schemes of combined attack. Several of our harbors are selected, and schemes of attack evolved by the students. After exhaustive and careful revision, discussion and correction some of these schemes should be tried out practically, as shown hereafter. Meanwhile the names of the harbors selected should be kept as nearly secret as possible, in order to enhance the element of surprise when these attacks are made.

(b) Practical Work.

1. Target practice ashore in connection with the regular practice of the class at the Coast Artillery School. After this is finished, the whole school embarks and finishes the course afloat.
2. Target practice afloat. The school-ship will attend dur-

ing a part of the fleet's battle practice. The student officers will be given every opportunity of witnessing and, if possible, of participating in this practice.

3. Attack and Defense of Harbors. After target practice is over, the school-ship will proceed to embark one or more designated companies of coast artillery and infantry. These, together with a reduced number of marines left on board, represent an expeditionary force. Meanwhile the coast artillery and the militia will be holding coast defense exercises at one or more of the artillery districts, and as these are not held simultaneously, at least one district will always be available for attack. While the student officers are attending target practice the proper authorities discuss the schemes of attack evolved by the former and select several artillery districts for attack. As nobody in said district has received warning of this, the conditions as regards surprise should closely approach the ideal. With its expeditionary force on board, the school-ship, assisted by such destroyers, etc., as the scheme may require, attacks the artillery district absolutely without warning, and attempts to carry out the selected scheme.

The benefits arising from this procedure are numerous and varied. The authorities on shore, including the artillery and the naval districts, are put on the *qui vive*; they will face actual emergencies, not supposititious conditions. Weak points may be unearthed in the plans of defense of the districts. Valuable practice in handling the resources of the naval and artillery districts (such as wireless and other communications, etc.) will be secured, thus trying out the "Regulations for the Government of the Naval Districts" approved by the Joint Board. Co-operation on shore will receive a great impulse.

On the other hand, the instruction and experience gained by the attacking force is even more valuable, if possible. They learn how to handle themselves both on shipboard and in small boats, how to make landings, how to depend upon their own resources, and in short, the myriad things they must know before they can form an efficient expedition. Most of these things can be learned by experience alone, and it is better that this experience be gained in peace times.

The expedition would make several such attacks upon different districts. After an attack is finished, its features will receive a thorough discussion, at which all officers involved will be present. This will include the officers of the Coast Artillery

and the naval district attacked, and the officers of the "expedition." The school authorities will delineate their scheme of attack and the commanders on shore will set forth their plans of defense. The detailed umpires will render their decisions and the reasons therefor. The causes of success or defeat in any phase will be analyzed, and as but few real soldiers or sailors will make the same mistake twice, a decided and rapid improvement in ability and skill can hardly be avoided.

The "practical" term, extending over several months, would give ample opportunity to change the personnel of the attacking force, thus providing for a rapid dissemination of theory and practice throughout both services.

In view of the report that the mobile forces are to be withdrawn gradually from "the plains," it will become more and more easy to include them in this plan of operations and at a nominal cost. Assuming them to be at one of the camps before mentioned, they could be rushed to the threatened point just as in actual war. This would give added opportunity for testing out and improving our methods of transportation and supply, etc. If the only thing gained was a system of quartermaster business that would survive the outbreak of war, the time and expense would be well spent.

Valuable practice for the landing force could be secured by an attack on our reservations at Guantanamo or Colon. In these localities the climate, terrain, etc., are so different from the average of our own coast, and so nearly typical of all Central America that the practical experience obtained would be invaluable.

2. *Standardization.* This a process ordinarily employed in civilian life to secure interchangeability of parts. It is the soul of modern business, and has done more to promote manufacturing interests than any other agent. It is rigidly carried out in principle in the army and none the less so in the navy. But if the two services are to work smoothly together it must also be carried out between the two. Imagine an expedition suddenly deprived of ammunition. The fleet would have tons of it, but unless the arms of the two services were standardized of what use would the navy ammunition be to the army? From this it can be seen how necessary it is that all munitions of war should be standardized. Of course, in some cases such as outer clothing this is impracticable. But whenever it is at all possible the principle should be thoroughly carried out. Shoes and articles of

underclothing should run in the same sizes, ration values equalized, paper work correlated as much as possible and, in short, the two services should be placed so that business could be transacted between them with the least possible trouble.

But at present it is next to impossible for one of them to transact business with the other with efficiency or economy. "At Key West, for example, during a long drought, the artillery garrison at Fort Taylor bought fresh water from the navy and paid one cent per gallon, while fresh water was delivered to the vessels of the navy at a cost of about four mills per gallon. This has since been rectified, and fresh water is now delivered to the army at about one mill per gallon, the actual cost of pumping the rain water." ("The American Gibraltar," by Commodore W. H. Beehler.)* The above is a good illustration of the mutual position of the two services. Why cannot they be put on such a basis that situations like this cannot occur?

Our signaling systems are not standardized, and it is evident that here perfect co-ordination should obtain, especially between the personnel of the naval and of the artillery districts. As an example of the conditions now existing we might mention the fact that the navy is required to use "Continental" Morse, while the army uses American. The former is necessary on account of the fact that practically all ships use it, and the army uses "American" on account of the commercial telegraph lines. This is why certain call letters that are different in the two alphabets must not be assigned to signal stations. Maneuvers and actual work constitute the best methods of rectifying this state of affairs.

Straws show which way the wind blows and no better illustration could be found than in the seemingly unimportant report that the navy is to have its compasses regraduated in degrees instead of points and that the 0° is to be at the north point, which is exactly opposite to the practice in the army where the zero is at the south.

3. *Popular Education.* One of the most serious impediments to a thorough co-operation between the army and the navy might be described by the term "popular clamor." In our popular form of government this is a serious item and cannot be overlooked. Many officers well remember with grim amusement what a hysterical clamor for protection arose when war was declared with Spain. And when the Spanish fleet left

* See JOURNAL for March, 1910

home for "parts unknown" this clamor became well-nigh deafening, the pressure brought to bear almost irresistible, and every hamlet within fifty miles of salt water was screaming for a battleship and a regiment with which to protect its own particular pocket-book. Nothing would have suited better than to fritter down the nation's strength and dissipate it all along the coast.

The evil of this is self-evident. It caused no misfortune in our late unpleasantness, but it might bring disaster the next time, because the more powerful our adversary the more insistent and dangerous will be this cry from Cranberry Corners.

The best way out of the difficulty seems to lie in educating the people. It should be brought home to them that our fleet must be foot-loose; they should be *made* to understand that if they do their duty by the army it will be able, with the help of the navy, to annihilate any landing force of the enemy. They should know that an over-sea expedition has more important business in hand than to scout up a narrow river (where they would have to back out like a crab) simply for the purpose of shooting up a few farm houses. In short, they should have confidence in and support their defenders.

But here lies another danger. The American people are too "cocky" right now. If only the situations could be reversed! If only a modicum of the fantastic fear displayed by the populace on the outbreak of war and manifested in a belated liberality in appropriations could be shown now, in time of peace! Would there be any trouble in securing four—or ten—battleships a year? Would there be any difficulty in getting an army larger than the police force of New York City? And if but a scintilla of the maddeningly complacent self-conceit which now permeates our national being could be conjured up when war comes upon us, what balm to deafened ears and tired brains it would be!

So, in setting before the people the facts they should know, great care must be exercised to avoid the impression that we are impregnable. The country must not be lulled to a false sense of security. This requires skilful work, and to none but skilful hands should the task be entrusted. Already certain parties, due to injudicious compliments, are beginning to think that "the militia is as good as the army." Wicked, sinful thoughts like these should be squelched, promptly and effectually.

But if some means can be devised whereby the simple truths

mentioned above can be set before the Great American Voter, and, moreover, driven home into his innermost consciousness, then war will be stripped of one of its terrors, and strategy by popular vote will be abolished. Then the navy, and more especially the army will be free, the general and the admiral will consult and make their own plans for bringing about untidiness in the ranks of the enemy, without the assistance of the gentleman from the 'steenth Maine-achusetts District who wishes his lobster-pots protected.

CONCLUSION.

In the preceding discussion the writer has tried to keep in mind the qualities of economy (due to prevailing small appropriations), efficiency in results and practicability of operation. How well he has succeeded must be left to the mind of the reader.

DEFENDAMUS. 7.



THE CAMPAIGN OF DINALUPIHAN.

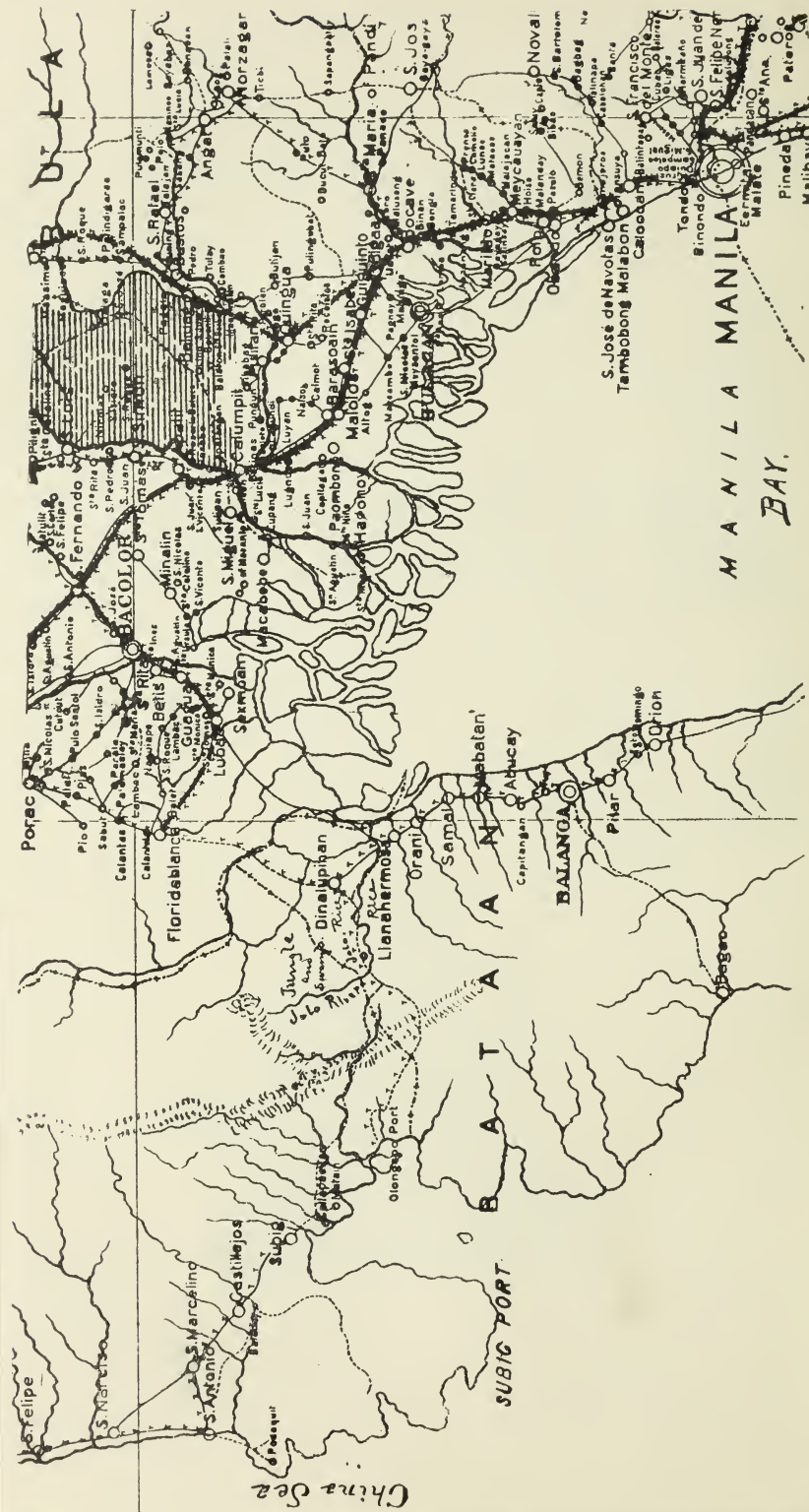
BY COLONEL A. C. SHARPE, 23D U. S. INFANTRY,
GOLD MEDALIST, M. S. I.



TO those who have been watching the development of our field training during the past twenty-five years the recent operations in the Province of Bataan, Southwest Luzon, were of absorbing interest. As a study of the possibilities involved they should engage the serious attention of every officer in the army. From our first crude attempts at Chilocco and along the desolate Cannon Ball away back in those embryonic days when it was impossible to expend even so much as a linch-pin for anything short of absolute necessities our progress has certainly been gratifying. And although not free from mistakes, our efforts have been characterized by high professional zeal and much hard work, until to-day we are finally realizing all the conditions of active service except the actual flight of bullets.

The general scheme of the Luzon maneuvers had been under consideration by General Duvall and his staff for several months. In fact, preliminary orders were issued as early as last August, when it was announced by circular that the post-graduate schools would give special attention to this subject and all the troops in the Departments of Luzon and the Visayas, with certain contingents of mountain artillery in Mindanao, were designated to participate. The month of February was selected as most favorable for these exercises, as it was liable to have little rain, was just before the rice-planting season and after the sugar harvest, and also promised the coolest temperature—or, more correctly speaking, less heat.

Accordingly, in the latter part of January, the troops began to assemble, those at the more remote stations coming by such transports as were available, which, in itself, was a valuable experience. Brig.-Gen. R. D. Potts, stationed at Fort McKinley, was designated to command the army of invasion, to be known as the Reds, and was authorized to embark his command and steam out of Manila Bay at any time after 6 A. M., February



China Sea

SUBIC PORT

BATAVIA

BALANGA

MANILA

BAY

MANILA

Tambobong Malabon

S. José de Navolas

San Juan

San Mateo

San Rafael

Bacolor

San Juan

San Felipe

San Antonio

San Marcelino

San Isidro

San Juan

San Mateo

San Rafael

Bacolor

San Juan

San Mateo

San Rafael

Bacolor

San Juan

San Mateo

San Rafael

17th. After passing Corregidor Island he was to be considered in hostile waters under a strong naval escort and charged with the duty of effecting a landing at some point or points on the west coast of Luzon between Moron, on the south of Subic Bay, and San Fernando, on the north of the Gulf of Lingayan. His objective was to be Manila. Should he elect to land in Subic Bay no troops were to disembark for thirty hours after his first ship should pass Grande Island, this delay being considered a reasonable time for the reduction of the forts. The wharves in Subic Bay were to be considered destroyed by the retiring Blues. General Potts' expedition was composed of the following troops:

Three regiments of infantry (Fourth, Sixth and Seventh).

One provisional regiment of scouts (Fourth, Ninth and Eleventh Bns.)

One regiment of cavalry (Twelfth).

One battalion Second Field Artillery (Mountain).

Detachments of Engineers, Signal Corps and Field Hospital.

All of these troops were at Fort McKinley or in camp at Manila.

The Blue Army, charged with the defense, was placed under command of Brig.-Gen. D. H. Brush and consisted of the following organizations:

Thirteenth Cavalry at Camp Otis, Manila.

Fourteenth Cavalry at Camp Stotsenberg.

Twelfth Infantry at Fort McKinley.

Second Battalion Phil. Scouts at Camp Otis.

Seventh Battalion Phil. Scouts at Camp Gregg.

One battalion Fifth Field Artillery at Fort McKinley.

Detachments of Engineers, Signal Troops and Field Hospital.

General Brush was charged with the defense of that portion of the coast which had been designated for invasion, and was authorized to begin movements at 6 A. M., February 16th, twenty-four hours in advance of the enemy. The Blue fleet was considered as too weak or too distant to be effective.

An excellent feature of the arrangements, the lack of which in former maneuvers has caused more or less dissatisfaction, was the effort to secure as high rank as possible in the corps of umpires. Maj.-Gen. W. P. Duvall himself acted as chief umpire, with Lieut.-Col. W. P. Evans, Maj. E. R. Stuart, Capt. S. C. Vestal and First Lieut. S. O. Fuqua as assistants. Maj.-Gen. W. H. Carter was senior umpire for the Reds and Brig.-Gen. J. J. Pershing acted in the same capacity for the Blues.

It was also ordered that umpires with troops be shifted about from one command to another as frequently as practicable to minimize the tendency, so natural under field conditions, of becoming identified or biased in favor of one side. Rest days were also prescribed over Sundays, beginning at 5.30 P. M., Saturday, and ending at 5 A. M., Monday. After the first Sunday there were to be daily rest periods from 11 A. M. till 2 P. M. Advantage was taken of these intervals to cook, change clothing, etc., and also to transfer the umpires, though under the conditions as they developed only one such exchange was found feasible during the entire campaign.

The following-named officers were detailed as umpires:

Col. A. C. Sharpe, Twenty-third Infantry.
Lt.-Col. F. A. Edwards, Twelfth Cavalry.
Lt.-Col. R. N. Getty, Seventh Infantry.
Maj. J. S. Mallory, Twelfth Infantry.
Maj. E. H. Plummer, Third Infantry.
Maj. A. P. Blocksom, Thirteenth Cavalry.
Maj. L. J. Hearn, Twenty-first Infantry.
Maj. M. Nichols, Third Infantry.
Maj. H. H. Sargent, Second Cavalry.
Maj. A. P. Buffington, Twenty-first Infantry.
Maj. William Lassiter, Inspector-General.
Maj. J. A. Penn, Twelfth Infantry.
Maj. M. F. Steele, Second Cavalry.
Maj. C. C. Smith, Philippine Scouts.

In addition to these field-officers there were also detailed as umpires fifteen captains and one first lieutenant, mostly graduates of the Leavenworth Schools, or otherwise of well-known temperament and professional qualifications. The senior umpires were also given assistants, Maj. T. T. Dickman, Inspector General, serving with General Pershing and Capt. G. H. Estes, Twentieth Infantry, with General Carter.

These preliminary arrangements seemed to be quite sufficient to meet all contingencies, and it may fairly be said that, with the single exception of the last battle where there was considerable confusion, the umpiring was efficiently performed and with an entire absence of serious friction or dissent.

THE STRATEGICAL SITUATION.

An examination of the map of southwest Luzon, under the conditions imposed, suggested the necessity of holding the small army of defense well in hand at some central point on the

railroad from which it could be speedily thrust forward as soon as definite information was received of the enemy's approach. This contemplated, of course, an absolute control of the railroad and telegraph, but as the regular daily traffic of the line was not to be interrupted a factor was introduced which in actual war might have been eliminated. (I say *might have been* rather than *would have been*, because in former campaigns, notably when concentrating at Tampa in 1898, there was no seizure of the railroads, and we were hauled around and about great distances, and lying on sidings long hours at the whim or convenience of the railroad officials.) Perhaps, on the whole, it was just as well to be hampered with this condition, and thus learn in mimic war how to get along with it, as we are again liable, in future conflicts, to be tied down by the same hesitating policy.

While there are no very favorable landing-places along the west coast of Luzon outside of Subic Bay and the Gulf of Lingayan, yet it was known to be entirely practicable, when the sea was not running high, to get ashore at several other points, notably off Iba, San Antonio and Moron. It would manifestly be of little strategic advantage to land near Lingayan, as the defenders could be speedily concentrated by rail and the country near the coast being intersected by numerous streams, esteros and marshes, the invaders' initial movements would be slow, while the defenders, being stronger in cavalry and field-artillery, would be favored by the great plains which spread out for miles on either side of the railroad. The probabilities, therefore, pointed to Iba or some point farther south. Examining this section it will be observed that the mountain range which parallels the west coast presents a very formidable obstacle to an invading army. The roads are generally mere carabao trails and the passes through the mountains little traveled and in bad condition. It was manifestly necessary to disembark as near to the foot of the passes as possible. From Iba a very fair road leads over the mountains direct to the railroad at Capiz, but a preliminary reconnaissance which both the Red and Blue commanders had been authorized to make revealed the fact that the bridges were out and the streams not readily fordable. The delay which these conditions would entail was considered sufficient to divert the Reds to some point farther south. Following down the coast there really appeared to remain but one point above Subic available, and this was the

open roadstead off San Antonio. From this place a road leads back through Castillejos and Subic, converging near the east exit of the mountain pass on the trail from Olongapo. If the Reds could land at San Antonio, force the mountain defile, brush aside the Blue outposts, if any, at Colo and Dinalupihan, and by a forced march penetrate to the western terminus of the railroad at Florida Blanca, their chances of success would certainly look promising. It was also borne in mind that they might land near Moron, at least a part of their forces, and pushing across the rice fields towards Balanga and Llanahermosa enter Dinalupihan from the south.

TACTICAL DISPOSITIONS

These considerations evidently inclined the Blue commander to expect his adversary in this direction and he made his dispositions accordingly. The Fourteenth Cavalry at Stotsenberg and the Seventh Battalion of Scouts at Gregg were ordered to march at 6 A. M., February 16th, on Florida Blanca, thence to Dinalupihan. The Twelfth Infantry, descending the Pasig River by lighters, entrained at 8 A. M. at Manila and proceeded to Florida Blanca, where it arrived at 1 P. M. Here it found mounts and a small wagon-and-pack-train which had been brought out and left by the Fourteenth Cavalry from Stotsenberg. By 3 P. M. wagons and mules were loaded and the march taken up for Dinalupihan. Owing to the narrowness of the road through the jungle in which several wagons of the Fourteenth Cavalry were overtaken and some of them found overturned and in which, also, some of the Twelfth Infantry train was upset, this regiment did not reach the Pagalangan River in rear of Dinalupihan till nightfall. Its commanding officer was charged with the primary duty of blocking the two trails (above described) leading over the mountain from Olongapo. To this end he was instructed to push forward one battalion as speedily as possible, one company on each trail pressing rapidly through to destroy the wooden bridges leading over the causeways from Olongapo. If these detachments were compelled to fall back by superior forces of the enemy they were to offer a stubborn resistance, delaying the enemy as much as possible, yet taking care not to be cut off. The remainder of the Twelfth Infantry was to intrench in the vicinity of Dinalupihan, the Fourteenth Cavalry on their left scouting to the south and

west of Leanahermosa. The Seventh Battalion of Scouts were ordered to move forward to Colo (Jolo) and watch the fords where the trails debouch. These detachments, having a total effective strength of over 1000 men, were thus well disposed, not only to resist any advance of the Reds via the mountain passes or the left flank, but also to hold their ground till the remainder of the Blue forces could concentrate. A signal squad also accompanied this command and soon opened communication by heliograph and lamp with a station which had been established by an advance party on Mount Santa Rita. At 9 P. M. (16th), Capt. Lafitte's battalion (Twelfth Infantry) after a brief rest and taking a bite to eat, resumed their march towards the mountains, where they arrived about 2 A. M., and by daylight were well down the slope towards Olongapo. The bridge was promptly destroyed and placarded and the detachment then fell back to a strong position in the mountains. Meanwhile the Seventh Battalion of Scouts, under Major Anderson, was coming forward, and by 3 P. M. of the 17th all of the advance detachments were in their designated positions.

The main body, following from Manila, was marching on San Fernando (Pampanga Province) encountering *en route* some formidable obstacles at the larger rivers, which caused them considerable delay. The trains of the advance troops accompanied the main body, but did not reach the front till near the close of the maneuvers.

Information now began to come in that the enemy's fleet had appeared off San Antonio, and later advices confirmed the expectation that a landing would be made in that vicinity. Through some error or accident the placard which had been posted on the "destroyed" bridge at Olongapo was knocked down or not observed by the advancing Reds, who soon came lustily forward in such preponderance of numbers as to completely surprise the Twelfth Infantry outpost, consisting of two companies under Captain Knabenshue. These companies were accordingly ruled out as captured. This occurred about 11 A. M. of the 19th. Captain Lafitte, learning of this disaster, attempted to escape with the remaining two companies on the other trail, taking up the race for the ford which he knew was strongly held by Anderson's scouts; but he arrived just too late, the enemy having reached the ford four minutes ahead of him. The capture of this gallant battalion, due in a measure, perhaps, to the loss of the placard on the bridge, was seriously felt by

the Blues and was especially regretted because of the splendid spirit and endurance which they had exhibited in their arduous task.

Major Anderson's trenches at the fords seemed most impregnable and the Negrito guides whom he had employed assured him that every known trail was covered, yet the Red scouts seemed to find one more avenue of approach through the dense jungle which had escaped the notice of even the wily Negritos. At all events an enfilade fire was opened on one of the trenches which led to a ruling by the umpires that the position was no longer tenable. Through a misunderstanding of the decision the other trenches were likewise evacuated and the whole advance line under Lieutenant Rimmer soon retired, halting finally at Jolo, where at 4.30 P. M. the umpires suspended the action to hold a conference. This being Saturday, the rest day began at 5.30 before hostilities could be resumed. The two contending forces, then about 1000 yards apart, remained in place till the following Monday.

Meanwhile the commanding officer at Dinalupihan, on learning of Lafitte's loss and Anderson's defeat, had wired to the commanding general who was at Florida Blanca asking authority to move forward in support. No reply was received to this until 5.50 P. M., twenty minutes after the rest day had begun. This reply was brought by Lieutenant Carter, Fifth Field Artillery, and was dated 2.45 P. M. Why the telegraph was not used does not appear. The signal communications throughout the campaign seemed to be very ineffective, due possibly to reliance on the commercial line instead of using our own men and material. (It was not until 3.50 P. M. of the 22d—five working days after the advance troops arrived—that a buzzer station was established with the Thirteenth Cavalry, which held a very important position on the right of the line.) The signal officers seemed to fully appreciate the situation but insisted that it was due to circumstances beyond their control. It would have seemed entirely feasible if the wire were available (and I was told it was) to string a line on the commercial poles or even through the trees along the road. Such a wire could at least have kept up with the Twelfth Infantry and would have ensured continuous connection with headquarters at Florida Blanca.

On Monday (21st) Anderson's Scouts fell back promptly under cover of the dark at 5 A. M., taking position in the

trenches on the right of the Twelfth Infantry, 1000 yards west of Dinalupihan. The Fourteenth Cavalry, which had been concentrated for rest over Sunday, occupied the trenches on the left, extending south to the Colo River. At 9 A. M. the Thirteenth Cavalry and Field Artillery came on the field, the commanding general arrived and preparations were begun for an advance. The Thirteenth Cavalry extended the line to the right, and after the rest period at 2 P. M. the line moved forward, batteries in rear of right and left wings, and Third Battalion, Twelfth Infantry, in reserve. By 3.45 P. M. the principal part of the line had succeeded in wading or swimming the muddy lagoon or stream which paralleled their front. One of the batteries came forward to the edge of the stream and fired several shots, under direction of the fire-control station which had been established at the church tower in town. The jungle in front was too thick to afford any field of fire, and the artillery effort was directed at the enemy's supposed camp or columns in rear. A signal detachment also came forward at this point and established a buzzer station. (I was afterwards informed that this belonged to the battery.) The Blue line, having pushed on into the rice paddies, soon engaged the enemy who, after a brief engagement in which their left flank was enveloped by the Thirteenth Cavalry, were ruled back with a loss of ten companies of scouts captured.

The troops being much exhausted and generally wet to the waist, a truce for the night was declared at 6.16 P. M. and they were permitted to return to their bivouacs, to be again in place the following morning at 7 o'clock.

At this moment it appeared that the advantage lay decidedly on the side of the Blues. The Reds were still struggling up the mountain trails, unable to be of much assistance to their small detachment in front, which now, greatly depleted by the loss of ten companies, was also presumably exhausted, short of rations and dispirited. The Blues, on the contrary, had quite a reserve of fresh troops (detachments of infantry and cavalry) which had not been engaged. Had they been brought forward at this interesting juncture the probabilities pointed to a rout of the Reds before they could have regained the mountain defiles. Conclusions of this character, however, are more easily arrived at after a battle than before, and it must be recognized that the uncertainty of the jungle in front, the lengthening ration road in rear, and the phantom of a raid round the right

flank over some mysterious trail unknown even to the sagacious Negritos, were sufficient to decide the general of the Blues to fall back to his trenches, cut the causeways, strengthen his field works and await developments.

The next two days were uneventful, the Blues remaining on the *qui vive* in their breastworks while the Reds, thankful no doubt for the respite thus generously afforded, were bending every energy to bring up the remainder of their troops and supplies. On the 24th, by herculean efforts, the Red (mountain) batteries under Major Van Deusen chopped their way through the tanglewood to a position on Mount Malasinbo, but were soon caught on the sky line and came under the fire of the Blue artillery at 4300 yards. Two regiments of Red infantry (Sixth and Seventh) were ordered at 8 A. M. (though not really starting till 10) to work their way along a wretched deer trail towards the Blues' right, still held by the Thirteenth Cavalry well entrenched. This march in a close thicket and in the heat of the day was described by those who participated in it as "bestly," and it was not till 3 P. M. that they began debouching from the defile and opened the attack. The Blue outposts, which were well advanced on this trail, had given timely warning of the enemy's approach, so that their appearance was the signal for a general fusillade all along the Thirteenth Cavalry line. As the attack developed the Fourteenth Cavalry was brought up at a run, but unfortunately was directed to reinforce the centre instead of the right, where its action would have been more effective. One battalion of Reds was ruled out as annihilated, but later appeared to be rehabilitated, and in the confusion which resulted the action soon presented impossible situations which had to be called off.

Thus terminated the campaign of Dinalupihan which, happily free from spectacular nonsense, is worthy of record as a dignified achievement in professional field work.

NOTES.

In addition to the comments embodied in this narrative it may be appropriate to say a further word regarding some features which appear susceptible of improvement.

1. I was agreeably impressed by the zeal and alacrity with which all the troops worked, not only in contact with the enemy but also on the march under most trying conditions of heat,

mud and rain. One company of Engineers worked continuously twenty-six hours bridging stream, and the indefatigable efforts of others, such as Lafitte's battalion, are certainly worthy of our best traditions. It seemed unwise, therefore, to lessen such ardor by keeping men unnecessarily for considerable periods under strained conditions, as they frequently were when on the firing line up to their waists in water. This could have been mitigated (as it was on the night of the 21st-22d) by declaring a rest period and allowing the men to secure dry clothing and a night's sleep. This method is followed in Europe and seems entirely compatible with the specific purpose of maneuvers, which may be assumed to be a maximum of instruction with a minimum of expense. More benefit is derived where officers and men are not fagged out. The plan pursued at Manassas of having the rest period end at midnight worked fairly well, as it afforded opportunity for rest and yet left a sufficient period for night operations.

2. The patrolling in this campaign was not effective. The commanding officer of the advance Blues and his adjutant frequently inspected the outposts, but there were few officers' patrols or scouts, and information was at all times meager, unreliable and exaggerated. On one occasion, after an entire battalion had waded a muddy river up to their waists, a very good foot-bridge was discovered not a hundred yards away! It must be borne in mind, of course, that the jungle was exceedingly dense and the obscure trails not easily followed, but a more persistent effort to scout the country would possibly have brought in some valuable information and perhaps have led to different dispositions and results.

3. In actual war positions would have been made stronger by flooding the rice fields. A considerable stretch of country in front of the Blue's right was quite dry, which, though favorable to an aggressive policy, was an element of weakness after it was decided to retire to a defensive attitude. This should have been placarded as flooded, the neglect of which exposed the right flank and nearby battery to unfavorable conditions.

4. There was a great shortage of skilled packers. Only two accompanied the Twelfth Infantry. A wise provision of existing orders in the Philippines requires that instruction in packing be given to soldiers. In the Twenty-third Infantry every company has four or more qualified packers.

5. The health of the troops continuing excellent through-

out the campaign the Medical Corps had little actual work to do. I believe it would be wise to require them to establish dressing stations in all deployments and to care for a percentage of hypothetical cases.

6. A neutral detachment should be left at each "destroyed" bridge to protect the placard until an umpire of the advancing troops arrives. This umpire should determine the number of hours' delay involved.

7. The maps of this region are not complete, although very good. The entire mountain range should be carefully explored and military roads (or railroads) brought forward toward the passes. The Negritos who inhabit this region have very limited knowledge of its topography.

8. This is the eighth time I have been privileged to participate in our maneuvers, and it gives me pleasure to note the increasing zeal and intelligence with which they are now carried on. This applies to the Staff Departments as well as the Line. The campaign of Dinalupihan was the best in many respects I have ever seen.

MANILA, P. I., *March 1, 1910.*



THE SHEEPEATER CAMPAIGN.

BY MAJOR C. B. HARDIN, U. S. A., RETIRED.



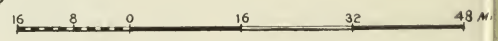
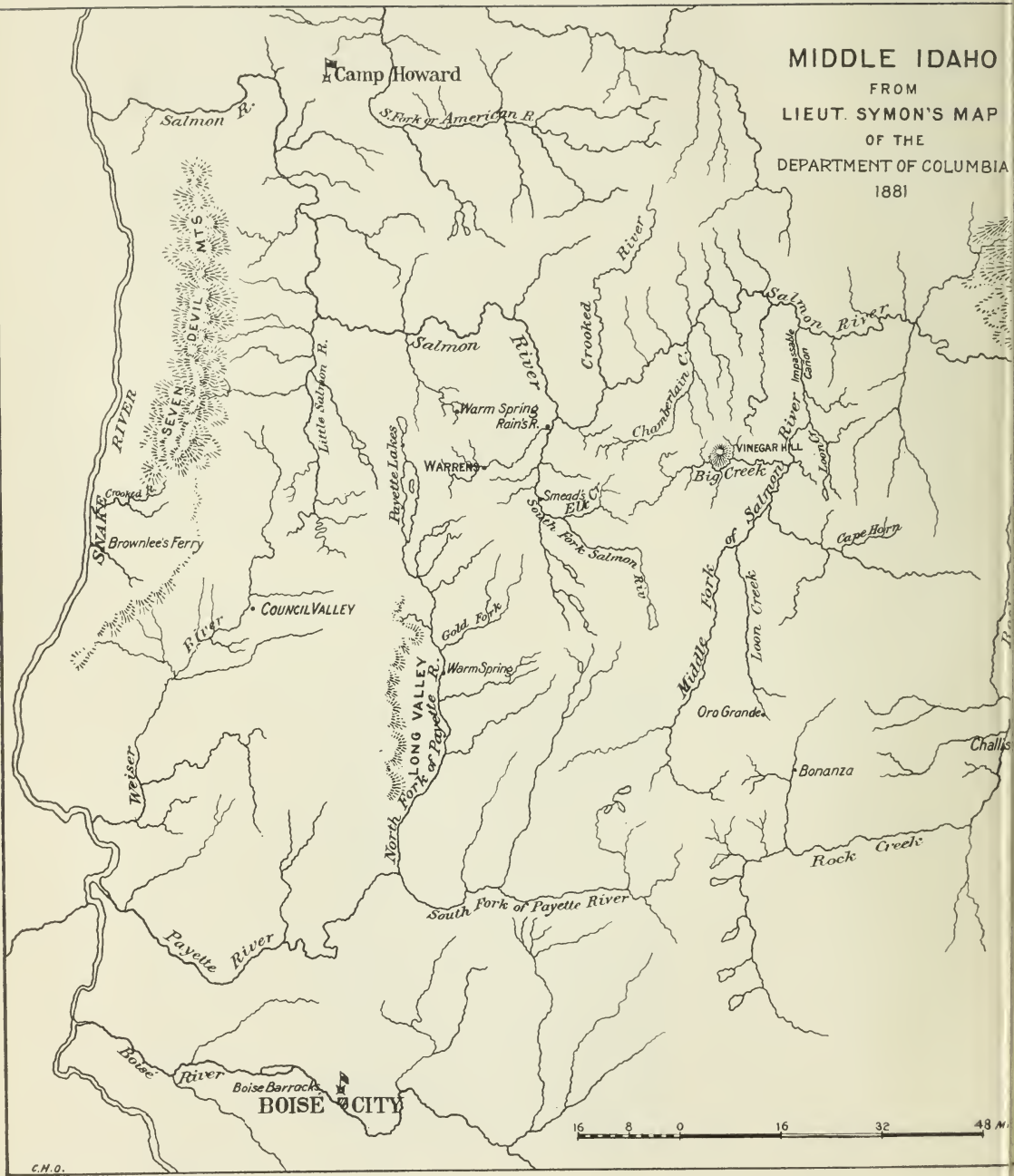
THE days of campaigning against hostile Indians are past. Nearly all of our Indian campaigns have been written up, either by those who have taken part in them, or by professional writers, who, in many cases, have added the embellishments necessary to make their stories commercially valuable. Almost nothing is known of the Sheep eater Campaign of 1879, in Middle Idaho, and but few people have ever heard of it. It took place in a section of Idaho which was very properly marked on the Department of the Interior maps of that

day as "Unexplored."

Hoping that the story of this campaign may be of interest to the friends of the army, and particularly to the few survivors of the campaign, the writer, who participated in the campaign as a corporal in Troop "G," First Cavalry, has with the aid of such data as he has been able to collect, and from personal recollections, attempted the task.

The band of Indians known as Sheep eaters was originally formed by outcasts from the Bannock and Shoshone tribes. Many years ago it was the custom of the Bannocks and Shoshones to meet each year in the neighborhood of the present site of Fort Hall, Idaho, to trade and gamble. These tribes were very friendly to each other, but this friendship was not strong enough to interfere with tribal pride, which would not countenance intermarriage between the tribes. But Cupid, who delights in interference with all laws and customs, was busy at these meetings, and the result was that, in spite of the rulings of the elders an occasional young buck of one tribe would find himself unable to resist the charms of a maiden of the other tribe, and would steal and run off with his sweetheart. All who thus offended were repudiated by both tribes and became outcasts. Banding together, they took up their abode in the rough country about the south and middle forks of the Salmon

MIDDLE IDAHO
 FROM
 LIEUT. SYMON'S MAP
 OF THE
 DEPARTMENT OF COLUMBIA
 1881



River, where they were from time to time reinforced by others who had in like manner offended their tribes. These Indians were known to placer miners as early as 1862. So far as I can learn, they led a lazy, peaceful life until after the close of the Bannock war of 1878, when they were joined by some bad Bannocks who had taken part in that war, and their troubles began.

Early in the Spring of 1879 the Indian Agent at Lemhi, Idaho, reported to the commanding general, Division of the Pacific, that five Chinamen had been murdered, in February of that year, at Oro Grande, a deserted mining camp on Loon Creek, about eighty miles northeast of Boise, Idaho, and that he supposed this murder had been done by some of the hostiles of the Bannock war of 1878, who had been wintering with the Sheepeaters. This report was communicated to the commanding general, Department of the Columbia (General Howard), with orders for him to send a detachment of troops from Boise Barracks, Idaho, to ascertain who the murderers were, and if Indians, to apprehend and bring them to Boise. At the suggestion of General Howard he was later authorized to send another detachment from Camp Howard, Idaho, as soon as the condition of the trails would permit. Accordingly, General Howard, on May 7th, 1879, sent orders to the commanding officer, Boise Barracks, directing him to send out Troop "G," First Cavalry—Capt. R. F. Bernard commanding—starting it on or about June 1st; the troop to proceed to Challis and operate from that point upon any information obtainable. At the same time, the Commanding Officer, District of the Clearwater, was directed to send about the same force (about fifty men) from Camp Howard toward Challis, to form a junction with Bernard as soon as possible. In his orders General Howard stated that it was his intention that when the two commands came together, Bernard being the ranking officer, the command should devolve upon him.

In compliance with these orders, Troop "G," First Cavalry, about fifty men, under Bvt.-Col. R. F. Bernard, and Second Lieut. John Pitcher, left Boise Barracks about the last of May; and a detachment of the Second Infantry, mounted, and numbering about fifty men, under First Lieut. Henry Catley, with Lieuts. E. K. Webster and W. C. Muhlenberg, Second Infantry, were ordered out from Camp Howard.

Bernard soon found that he had started too early. For when he reached Cape Horn Valley he found that he was forty-

eight hours ahead of his pack train, which was stuck in the snow. Here, at "Camp Starvation," as it was called, the men who had not been sent back to assist in pulling the pack train out of the snow spent their time at tightening their belts and vainly hunting for game. Having passed this point, Bernard moved on to Oro Grande, encountering more deep, soft snow *en route*, but getting through with less difficulty. Finding no fresh signs of Indians at Oro Grande, he attempted to follow an old trail which led down Loon Creek; but heavy rains and melting snow had made a mighty river of this usually small stream, and as the trail down the canyon crossed and recrossed the creek many times in the distance to be covered in a day's march, and it was impossible to follow these crossings with the pack train, he was compelled to leave the creek and climb over the mountains. Thus he escaped danger from water but only to encounter other difficulties almost as great. For, of course, there were no trails; the mountains were very rough, and, in many places, covered with fallen timber on the slopes and deep snow on the summits. The wear on the pack mules was tremendous. After floundering about through the mountains for several days, finding no fresh Indian signs, Bernard returned to Cape Horn Valley, from which point he sent his pack train to Boise for rations.

From Cape Horn, Bernard reported to General Howard as follows:

"* * * The country is, no doubt, as rough as any in the United States, and to get the Indians will be a work of great difficulty. Should they discover us before we do them, they can hide in the timbered, rocky mountains for a long time, and go from point to point much faster than we can, even if we knew where to go. * * * We have traveled over much country that no white man ever saw before—old guides and miners declaring that we could not get through at all."

Indeed Bernard had found some rough country; but it was nothing as compared with what he was to encounter later on, in that unexplored region.

Upon receipt of Bernard's description of the country, General Howard ordered Lieut. E. S. Farrow, Twenty-first Infantry, with his scouts, recently enlisted at the Umatilla Agency, to take the field, crossing the Snake River at Brownlee's Ferry, with instructions to form a junction with the other troops as

soon as possible.* Farrow had with him Second Lieut. W. C. Brown, First Cavalry (now Major Third Cavalry), seven enlisted men of the Twenty-first Infantry and twenty Umatilla Indians, all mounted. These two energetic young officers had used excellent judgment in selecting the soldiers and Indians to make up their organization, which, though small, was very efficient, as shall be seen later on.

These twenty Indian scouts were the pick of the Umatilla tribe, mounted on hardy little Cayuse ponies selected from the countless herds then roaming over the Umatilla reservation—forty ponies for the twenty scouts. The head sergeant was Ya-tin-ow'-itz, the war chief of the Umatillas. He was a grave, dignified Indian of the Fenimore Cooper type, whose word, on account of his tribal position, was law with other members of the band, and whose experience as a warrior was such that the young lieutenants commanding the detachment were glad to defer to his judgment in the trying situations in which they were placed at various times during the campaign.

Farrow's Scouts left the Umatilla Agency on July 1st, crossed Snake River by swimming their herd near Brownlee's ferry, and arrived at upper Payette Lake July 19th, where, learning that Indian "sign" had been seen near the headwaters of Crooked River in the Seven Devil Mountains, the detachment spent ten days of hard marching in that excessively rough country but found nothing.

On August 3d Farrow sent out another party to scout Long Valley, and, on the same date, got in communication with Bernard, who was heading in that direction from Warrens, being lured by a report that Farrow was on the trail of a band of hostiles, who had a large number of horses. Farrow had

*An incident is related by one of the officers which occurred as the scouts were leaving their reservation which shows on the part of the Red men an affection for their families, which those not acquainted with the Indian character would hardly suspect.

Young Chief, one of the principal braves of the tribe, asked, as most of the scouts were enlisted from this camp, that the command stop there in passing to allow "good-byes" to be said, and his request was approved, and as the column halted the scouts of their own motion formed line, and Young Chief made them a farewell address and took occasion to hope that the officers would see that their men had enough to eat and wear at all times during the coming campaign, something, it is to be regretted, they found impossible to do. Then the chief, followed by his braves, shook hands all along the line, commencing with the officer. Then came the squaws with their papposes on their backs, taking care that each pappoose placed its tiny brown hand in that of the officer.

As their families passed along the line, these stalwart braves, usually so stoical, could not conceal their emotions, and tears streamed down their cheeks as they realized the seriousness of the step they were taking, and that many moons must pass before they should see their squaws and papposes again.

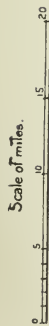
learned that this trail had not been made by Indians, and had sent this information to Bernard, who, however, did not receive it until he had marched some seventy miles in, what afterward proved to be, the wrong direction.

About this time Bernard received the first news of Lieutenant Catley, commanding the detachment sent out from Camp Howard. This officer had left Camp Howard on time, as directed, proceeding as far as Warrens, where he was stopped by deep snow, and where he remained until the latter part of June. By July 11th he had succeeded in getting as far as the mouth of the south fork of the Salmon, from which point he worked his way eastward, over a very rough country, to Big Creek, a tributary to the middle fork of the Salmon. Here, finding a fresh trail, he followed it down the creek, through a deep and rocky cañon, and, on July 20th, fell into an ambushade, from which he felt obliged to retire with a loss of two men wounded. The Indians who attacked him probably numbered fifteen warriors. Falling back to his pack train, he started to climb out of the cañon; but the hostiles surrounded him, on what was then named "Vinegar Hill" (prominently marked on recent maps of Idaho, though it is not a prominent peak), from which point, after being cut off from water for many hours, and after the Indians had made a fruitless effort to burn him out, he escaped in the night, with the loss of the greater part of his baggage and rations and sixteen pack mules lost in the darkness. He then took up his march for Camp Howard, sending on ahead his report of the affair to Colonel Wheaton, commanding the District of the Clearwater, who, upon receipt of the report, ordered Capt. A. G. Forse, with twenty-five men of his troop ("D" First Cavalry), to reinforce Catley and stop the retreat.

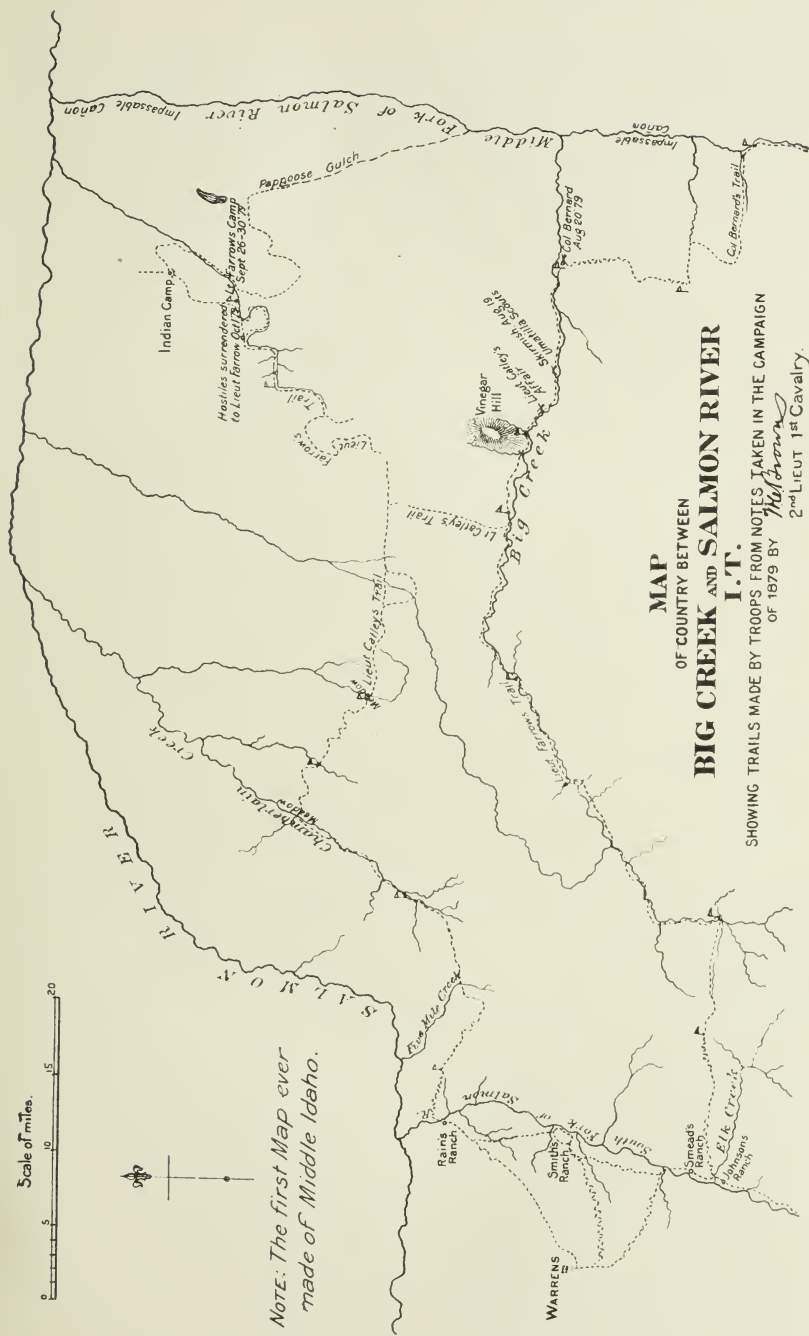
Lieutenant Catley had been most unfortunate, but he had accomplished one very important piece of work. He had found the Indians.

Upon learning of Catley's defeat, Bernard sent orders directing that officer and Captain Forse to meet him at the mouth of Elk Creek, south fork of the Salmon; and, having been joined by Farrow, at Warm Springs, north fork of Payette River, on August 6th, he started for Elk Creek, trying a short cut across the mountains, where there was no trail, and which proved to be disastrous to his saddle and pack animals, many of the latter being lost en route.

The mountains of Idaho are grand and beautiful; but can-



*Note: The first Map ever
made of Middle Idaho.*



MAP OF COUNTRY BETWEEN **BIG CREEK AND SALMON RIVER** I.T.

SHOWING TRAILS MADE BY TROOPS FROM NOTES TAKEN IN THE CAMPAIGN
OF 1879 BY *Thos. Brown*
2nd Lieut 1st Cavalry.

not be thoroughly enjoyed by those who are compelled to cross them by forced marches and with exhausted animals. The mounted troops usually made their day's march by about noon—always before night-fall—but they usually had to wait in camp until late at night for the arrival of the pack train with provisions and bedding. Grass was scarce, and the poor animals had but little time in which to gather what there was of it. The result of this march was that Bernard's transportation was a wreck when he arrived at the mouth of Elk Creek.

Here he rested a day before pushing out into the *terra incognita*. Nearly two weeks before he had sent in to Boise Barracks for a medical officer, and Assistant Surgeon Timothy E. Wilcox (now Brigadier-General, U. S. A., retired) was sent with a couple of guides and a few enlisted men to join the command. They expected to join Bernard in three days and were rationed accordingly. Bernard had changed his camp in the meanwhile, and guides sent to intercept Wilcox failed to find him, with the result that the latter's party marched some eight days before reaching the command on the 12th.

They had eaten the last of their rations several days before, and subsisted upon grizzly bear, salmon and deer which they were lucky enough to secure.

The various commands having assembled at Elk Creek, the expedition, on August 13th, started after the Sheepeaters. The entire march of the first day was made up the side of a mountain, so steep that it could be climbed only by making a zigzag trail. The distance marched was probably not more than eight miles, but it took the entire day in which to make it. On the second day the divide was crossed, and the command camped near the head of Big Creek. This stream was followed during the next five days along an old Indian trail, which crossed and recrossed the creek many times in the distance covered by a day's march. In many places, and for considerable distances, neither bank could be traversed, the command being obliged to march in the bed of the creek over rough boulders. Here, in this deep cañon, we had sunset at two o'clock P. M. The Indians must have wondered at the nerve of white men who would attempt such a march with a pack train over such a trail. Evidently they were not looking for the accomplishment of such a feat, as there was no evidence that they were observing the invaders. During these days Farrow and Brown, with the

scouts, kept one day's march in advance of the main body of troops.

On the 19th the scouts drew the fire of the hostiles at a point a few miles below the scene of Catley's affair. This was what the scouts wanted, and they rushed the hostiles at once, charging their camp in fine style, and so quickly that they were glad to escape with their lives. Their camp was captured, and with it a number of *caches*, in which were found a quantity of rations and baggage which had been captured from Catley. In this rather brilliant affair the scouts did not lose a man.

In his report of this action Colonel Bernard said: "** * ** While the scouts were marching along the trail the Indians fired upon them from the top of a rocky ridge. The scouts returned the fire, charged across the ridge, drove them from their position and pursued them down the cañon to their camp, which they found deserted. They left much of their provisions, clothing, cooking utensils, skins, etc. They passed over a high, rocky mountain, going southeast, and have set fire to the country in our front and rear. Farrow and his scouts are now on their trail. They have done splendid service. The country is very rough, probably the roughest in the United States. The Indians have but little stock. Much of the property taken from Lieutenant Catley's command was found in the Indians' camp. Lieutenants Farrow and Brown deserve the greatest credit for bravery and energy displayed since under my command. Their scouts, also, did splendidly ** * **."

Bernard came up that evening, and went into camp in the captured stronghold, which was located on a shelf of the mountain, about 500 feet above the bed of the creek. This shelf contained about five or six acres of ground, covered with good grass. At one end were some trees, and a fine spring of water. It was an ideal stronghold.

On the morning of the 20th of August the command separated, Catley starting back toward Warren's to meet a train with rations, now much needed by all, while Bernard and Forse moved out on the trail taken by Farrow's scouts in pursuit of the hostiles. Each separate command left camp before its pack train was ready to start, leaving a small rear guard to accompany the train. Bernard's rear guard consisted of a corporal and six privates, while Catley's rear guard consisted of a sergeant and six privates. The troops had been gone nearly an hour, and the trains were about ready to start, when the hostiles,

perhaps twelve to fifteen in number, having doubled back to a bluff overlooking the camp, and about sixty feet above it, opened fire on the rear guards. One private of Catley's command was fatally shot, and the remainder of this detachment, headed by the sergeant, promptly stampeded. Bernard's men held together, and by a flanking movement up the side of the mountain, which movement was executed under fire from some of the soldiers who had stampeded, as well as from the hostiles, drove the latter off without further loss. In this affair the chief packer, Jake Barnes, showed up splendidly. Having moved his train to a sheltered position, he, under a heavy fire, re-crossed the exposed ground, bringing ammunition to the troops engaged, and then, securing a rifle which had been thrown away by one of the stampeding men, he approached the corporal and, awkwardly executing the "Rifle Salute," said with a laugh: "I want some of this myself. Private Barnes reports for duty, sir." This had an excellent effect upon the men, who were naturally somewhat shaken by having seen half their number run away.

The firing in this little affair brought back Bernard and Catley; but when they arrived, the fight was over. This last statement is recorded because, probably through a typographical error, Bernard's report was made to read: "* * * * The Indians were soon dislodged and driven away after the commands returned."

The wounded man died that day, after having one leg amputated, and was buried near the camp.

The troops remained in this camp until the following morning, when they again separated, Catley to return to Warrens for rations and Bernard and Forse making for the mouth of Loon Creek, where they expected to meet rations from Boise. Fourteen mules gave out, and were shot on this day, during the hard climb out of Big Creek cañon.

Bernard climbed the mountain and overtook the scouts that evening, August 21st, and learned that during that day and the one previous the scouts had picked up twenty-eight head of stock abandoned by the hostiles. During this and the following days several hostiles were seen at a distance, but there was no fighting. It was evident that the enemy had scattered.

The scouts remained with Bernard until the 24th, when the command again separated, near Impassable Cañon, middle fork of the Salmon, Bernard and Forse starting up the river for

the mouth of Loon Creek, leaving Farrow and Brown to hunt the Indians.

Arriving at the mouth of Loon Creek, and not finding the rations, Forse was sent back to meet Catley, who was to bring rations into the Big Creek country, while Bernard proceeded up Loon Creek in search of his missing train; his command being without food for three days before game of any kind could be found. Finally, one afternoon, some salmon were discovered and shot. The command went into camp at once and the salmon were quickly devoured, without salt or bread. Some of the men were able to hold this load down, but many could not. Here the brave Jake Barnes again came to the front. Selecting two of his best pack mules, he made a wonderfully quick trip to Bonanza, a mining camp, where he secured provisions sufficient to keep down hunger for two days, by the expiration of which time the long-looked-for pack train from Boise was met. Bernard's animals being unfit for further field-service, and his men in rags, he proceeded toward Boise as far as the Payette River, from which point he reported to General Howard, who, in a dispatch dated August 31st, authorized his return to Boise Barracks.

The scouts, under Farrow and Brown, remained in camp near Impassable Cañon until August 26th, sending out small parties to look for signs of hostiles, and vainly endeavoring to open communication with them by means of a flag of truce. On the afternoon of the 26th they started back on the old trail toward Warrens, and in quest of much-needed rations. Forse, returning from Bernard's command, entered the camp just as Farrow was leaving it. His command also was out of rations, and he was making for Warrens.

Farrow, returning via the old camp of the hostiles, was fortunate in finding, on the 27th, four more caches containing flour, bacon, soap, tobacco, dried salmon, blankets and clothing, all of which (excepting the salmon) had been captured from Catley's command in July. He also found some stray cavalry horses, but had to abandon several of his own animals. With great difficulty, owing to the condition of his animals, he continued his march, with little to eat, abandoning and shooting exhausted animals, and picking up others which had been abandoned by other troops, until August 31st, when he met Captain McKeever, Second Infantry, who had taken over the late command of Catley, and was taking rations out to Forse, still some-

where in rear. Farrow secured three days' rations from McKeever, and, on the same date, reached the head of Elk Creek. He arrived at Smead's ranch on the south fork of the Salmon River on September 1st, and, on the following day, Lieutenant Brown started for Camp Howard, bearing dispatches for the Department Commander. He arrived at Camp Howard on the 4th, received a reply to his dispatches on the 7th, and at once loaded a pack train with supplies, and started back to Farrow's camp at Smead's ranch. He reported to Farrow on the 10th, with orders from General Howard to complete the campaign. The pack train did not reach Farrow's camp until the afternoon of the 15th.

On September 16th Farrow again started out in search of the hostiles, marching via Rains' ranch and Chamberlain Creek, following the trail made by Lieutenant Catley when that officer first entered this section.

On the 21st instant two squaws, one small boy and a papoose were captured and a trail discovered leading toward Salmon River on which a small party was sent as a sort of advance on guard. They soon struck the trail of a small hunting party of the hostiles which was followed, and at sunset they reached a ridge overlooking the cañon of Salmon River.

Evidently the hostile camp was not far distant. The remainder of the scouts having joined, a dry camp was made at which the prisoners and all impedimenta having been left under guard, the officers and about fifteen scouts started down on the trail which led for some two miles over exceedingly rough country to a ridge. No sooner had they reached this ridge than the barking of a dog about three-fourths of mile distant indicated the location of the camp. The party then halted and two of the best scouts were sent to crawl up to the hostile camp, the fire of which could plainly be seen, and plans were made for an attack at daybreak.

It was a bitterly cold night, and no fires, of course, could be made; the party simply must shiver and await the return, about midnight, of the scouts, who had located the camp perfectly in a little open valley, with their horses picketed about the camp-fire.

At 1 A. M. the party started, treading their way as softly as possible through the fallen timber and undergrowth. When near the camp they divided, each officer taking half the scouts and so disposing of them in extended order to make the escape

of any hostile impossible. Orders were given to close in and open fire at daybreak. The camp-fire was no longer visible, but the horses could be seen and at the first break of day the lines closed in with every eye strained to catch a glimpse of the enemy. Nearer and nearer they closed in; the camp was there but—the hostiles had fled!

Some time between midnight and dawn they had in some way been apprised of the coming of the scouts, and hastily extinguishing their fire by throwing water on it, and stabbing their ponies, they had hurriedly left. The last poor brute which had been stabbed had the six-inch butcher-knife thrust to the hilt still sticking in his side. They had taken this means of disabling the animals rather than killing them, hoping that our people would leave them.

The hostiles had left five or six hundred pounds of partly cured elk meat and four horses. Having spent the previous night in reconnaissance, the command rested on the 22d, sending out one Umatilla scout and one of the captured squaws with a white flag to endeavor to communicate with the hostiles. Another scout found the trail of the hostiles leading eastward. He also found the carcass of the dog which had, by his barking, betrayed them. The dog had been hanged for his crime. On the 23d Farrow sent back two men for a doctor, more flour and some horses, while he and Brown, with thirteen scouts, followed the hostiles. On the 24th, with the assistance of a captured squaw, they found the trail, and on the same date found two small camps of from four to six lodges and about three or four days old. A squaw was sent out to look for her people, she leaving her pappoose with the scouts. She returned on the morning of the 25th, having found nothing, and was again sent out.

Matters seemed almost hopeless, but they say "The darkest hour is just before dawn." Within two hours of their return on the 25th from a fruitless scout the camp was startled by a shrill war whoop about half a mile distant in the open timber.

Careful search with field glasses finally revealed the Indian half concealed behind a tree. Brown, taking Corporal Wat-is-Kow-Kow, who could speak a little Shoshone, advanced armed to meet the Indian, at the same time making peace signs. The Indian changed his location and soon all were out of sight of camp, close to a large area of underbrush.

When within about 100 yards Brown discovered that the

Indian had a rifle, and motioned him to leave it. After some parleying with Wat-is-Kow-Kow as to who Brown was, and finding him only the second in command, the Indian complied—a fortunate thing for him, for the scouts said that had he been the chief officer the Indian would doubtless have shot him.

When he squatted down to leave his rifle he carefully adjusted his revolver at his back out of sight but within easy reach—he proposed to take no more chances than necessary.

He was a Bannock who had taken part in the war of 1878. He said he was tired of fighting and wanted to quit. He had been near enough to Farrow's camp during the previous night to hear the scouts talking. This Indian was sent out to bring in his people, and he returned on the following morning, bringing in another Bannock and reporting that he had been unable to find the others.

Farrow remained in one camp from the 26th to the 30th, flying a white flag over his camp. On the 28th a severe sleet and snow storm came to remind the scouts that it was near the time to end the campaign.

It rained and snowed (mostly snow) for the next four days. Rations were getting so low that the command was placed on half rations. Their only tents were shelter halves, which by this time were worn full of holes.

Fortunately the hostiles were not aware of the fact that snow and hunger must soon drive the scouts out of these mountains on the trail for the nearest supplies. In fact it was a question of soon getting out, or of wintering in the Salmon River Cañon, living on the game that abounded in this section and which, driven from the high mountains, came down along the streams to feed.

On the 1st of October a Bannock, who had been sent out, returned, bringing in nine bucks, and twenty-four squaws and papposes and eight guns. Four more bucks and enough squaws and papposes to swell the number of captives to fifty-one came in during the next day or two, and as these were all who could be located Farrow started homeward.

On October 2d Lieutenant Brown, with a small detachment, left Farrow, proceeding to Warrens, where he arrived on the 3d. Here he remained until the arrival of Farrow, pushing out horses and rations, and attending to everything necessary in the way of assisting Farrow. Upon the arrival of Farrow

at Warrens, Brown, with his detachment, set out for the Crooked River country to hunt for horse thieves. He scouted the Crooked River country and Council Valley and other localities, finding no horse thieves or any evidence that horses had been recently stolen. This extra work had been thrust upon the scouts by reckless rumors. Not many white men had been encountered by the troops in the field, but the few who were seen seemed to be loaded with information concerning Indians and horse thieves, none of which information had any foundation in fact. Having finished his scouting, Brown proceeded to the Umatilla Agency, arriving on October 22d.

Farrow, moving as rapidly as possible with his prisoners, came on to Umatilla Agency, where he was given a grand reception by the Umatillas and the citizens of Pendleton, Oregon, and later he delivered his prisoners at Vancouver Barracks. The campaign had been thoroughly completed.

This is the story of the Sheepeater Campaign. Of course the writer could have filled in with many stories of swimming of rivers; of the wonderful tumbles taken by pack mules without, in many cases, killing them; of encounters with bears and other large game; of the wonderful trout streams and the big catches made; of the fruits found; and of the many incidents—some very funny and some quite the reverse—connected with the everyday life of the soldier in the field. These side stories, however, from lack of space, must be omitted. The campaign was one of hard work for all who were engaged in it; and the reader must not overlook the fact that those excellent officers, Bernard, Forse, Asst. Surgeon T. E. Wilcox and Pitcher, and the men under them, contributed their full share of work and are entitled to credit for what they did. Farrow and Brown stand out prominently in this story, because, having been “in at the death,” they seemed to have been entitled to receive the “brush.”

Had the incidents which are herein recorded occurred since 1898, the names of Farrow and Brown would be familiar to every American citizen; but in the days of which I write, such deeds as their's were too common to attract general notice. That General Howard appreciated the work performed by the young officers who finished the campaign is shown by the following telegram, announcing the final result, which he sent to the Division Commander:

ADJUTANT-GENERAL MILITARY DIVISION PACIFIC,

Presidio, San Francisco.

My Annual Report indicated a failure in the main object of the expedition against the Sheepeaters and renegades located between the Little Salmon and Snake Rivers.

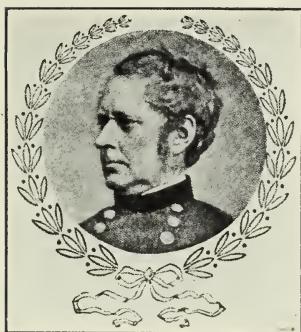
Now it is reversed, and the expedition has handsomely been completed by Lieutenant Farrow and his scouts having defeated the Indians in two skirmishes, capturing their camp with stores and stock. He has finally forced the entire band to surrender, and will deliver them as prisoners of war at this post.

Lieutenants Farrow, Twenty-first Infantry, and W. C. Brown, First Cavalry, with their seven enlisted men, citizen employees and Indian scouts, deserve special mention for gallantry, energy and perseverance, resulting in success. There is not a rougher or more difficult country for campaigning in America.

Please add this to my report.

HOWARD,
Commanding Department.





THE CHANCELLORSVILLE CAMPAIGN.*

BY MAJOR JOHN BIGELOW, U. S. ARMY.



WHILE attending to the improvement of his army, Hooker bethought himself of what he should do to satisfy the President's and the country's desire for a successful campaign. On this subject he obtained the views of others but did not give his own. He "kept his intentions an entire secret from everyone, fearing that otherwise what he intended to do might come to the knowledge of the enemy."¹ In the letter from the President already cited, dated January 26th, he had an intimation that the administration wanted a victory and did not care in what form. On the 31st of January he received a letter from General Halleck expressing his views as follows:

In regard to the operations of your army, you can best judge when and where it can move to the greatest advantage, keeping in view always the importance of covering Washington and Harper's Ferry, either directly or by so operating as to be able to punish any force of the enemy sent against them.

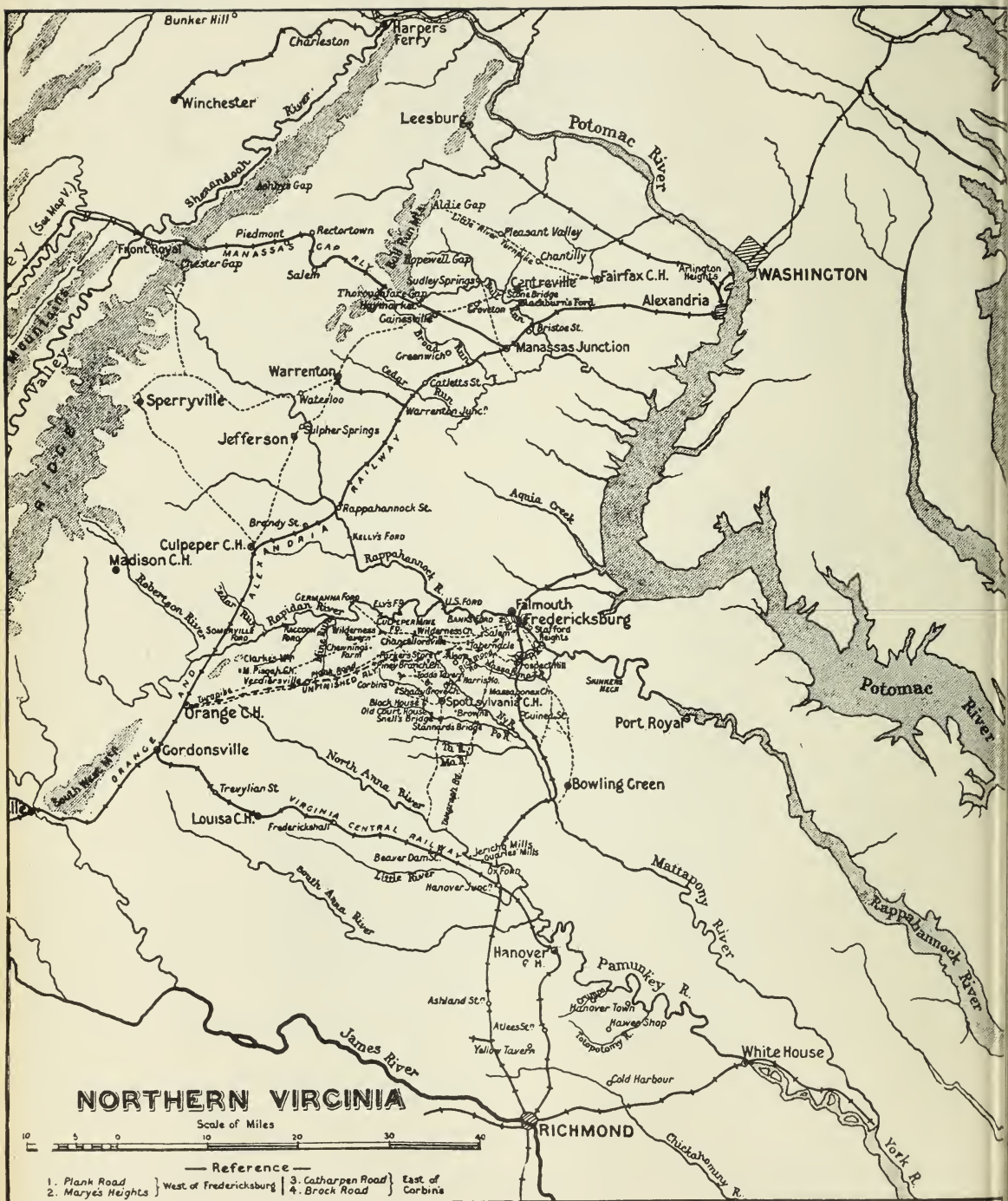
I inclose herewith a copy of my letter of the 7th instant to Major-General Burnside * * * That letter was submitted to the President and approved by him * * *

In the inclosure Halleck says to Burnside:

* * * When the attempt at Fredericksburg was abandoned, I advised you to renew the attempt at some other point, either in whole or

*From advance sheets of a military study of the *Chancellorsville Campaign*, by Major Bigelow, contained in a volume now in press.

¹Butterfield, *Rep. of Com.*, IV, 74.



in part, to turn the enemy's works, or to threaten their wings or communications; in other words, to keep the enemy occupied until a favorable opportunity offered to strike a decisive blow. I particularly advised you to use your cavalry and light artillery upon his communications, and attempt to cut off his supplies, and engage him at an advantage. In all our interviews I have urged that our first object was not Richmond, but the defeat or scattering of Lee's army, which threatened Washington and the line of the upper Potomac.

I now recur to these things simply to remind you of the general views which I have expressed, and which I still hold. The circumstances of the case, however, have somewhat changed since the early part of November. The chances of an extended line of operations² are now, on account of the advanced season, much less than then. But the chances are still in our favor to meet and defeat the enemy on the Rappahannock if we can effect a crossing in a position where we can meet the enemy on favorable or even equal terms. I therefore still advise a movement against him.

The character of that movement, however, must depend upon circumstances, which may change every day and almost every hour. * * * It will not do to keep your large army inactive. As you yourself admit, it devolves upon you to decide upon the time, place and character of the crossing which you attempt. I can only advise that an early attempt be made and as early as possible.

This communication is made up of hints and suggestions, except for the two positive directions:

(1) That the Army of the Potomac shall assume the offensive without any unnecessary delay.

(2) That it shall not uncover Washington.

With these sole limitations, Hooker was free to plan and direct the operations of his army according to his own ideas.

On the 2d of February Lieutenant Comstock, Chief Engineer Officer, recommended to Hooker the fortification of his base at Aquia Creek Landing as a protection to his rear-guard in case of an embarkation, and to his depot against raiding parties in case of an advance. This recommendation was adopted; the construction of the necessary works commenced on the 8th of February and terminated on or before the 9th of March. On the 3d of February the same officer submitted to Butterfield a report on the topographical and tactical features of the following points of crossing (Map 2), commencing downstream: Skinker's Neck, Hayfield's, Seddon's, Franklin's Crossing, Banks' Ford, and United States Ford, without recommending any of them.³ On the 6th he wrote to Butterfield suggesting for consideration "the propriety of thoroughly preparing the

²Of operating far from one's base. Halleck seems to refer especially to the execution of wide turning movements. J. B., Jr.

³*W. R.*, 107, pp. 980, 981.

approaches which would be needed if a crossing of the river were attempted either at United States Ford or at Seddon's."

On the 8th he submitted to Hooker a memorandum for bringing the material for a bridge from Baltimore by water to and up the Rappahannock and throwing the bridge at Seddon's or Skinker's Neck. Hooker was thinking at this time of turning Lee's right flank, and forcing it from the Richmond and Fredericksburg Railroad. He intended then to defeat his army in battle, and compel him to retreat toward Gordonsville, thus uncovering Richmond.⁴

He spent the 11th of March in Washington with the President, the Secretary of War, General Halleck, and the Committee on the Conduct of the War. What passed between him and the other members of this council is not known, but it may be assumed that he discussed with them his plan for getting around Lee below Fredericksburg. On this visit, and on others of similar character, he exhibited great enthusiasm for his prospective campaign.

At Falmouth on the 19th he reviewed the XII Corps. Meeting the officers afterward at Slocum's headquarters, he expressed to them his reliance upon their assistance and hearty coöperation in the impending campaign, and his determination that, so far as he was concerned, there should be no more mistakes or doubtful results. "If the enemy does not run," he said, "God help them."⁵

Again on the 29th, he remarked to a party of officers whom he was entertaining in his tent: "I have the finest army the sun ever shone on. I can march this army to New Orleans. My plans are perfect, and when I start to carry them out, may God have mercy on General Lee, for I will have none."⁶

A few days later he received the following instigation to action:

WASHINGTON, D. C., *March 27, 1863, 2:30 P. M.*

MAJ.-GEN. JOSEPH HOOKER, Falmouth, Va.:

Dispatches from Generals Dix, Foster,⁷ and Hunter,⁸ and from the west, indicate that the rebel troops formerly under Lee are now much scattered for supplies, and for operations elsewhere. It would seem,

⁴*Across the Continent with the 5 Cavalry*, by Captain G. F. Price, pp. 113, 114.

⁵*New York Tribune*, March 21, 1863.

⁶*War Talks in Kansas*, p. 194.

⁷Maj.-Gen. J. G. Foster, commanding Department of North Carolina, headquarters New Berne.

⁸Maj.-Gen. D. Hunter, commanding Department of the South, headquarters Port Royal.

under these circumstances, advisable that a blow be struck by the Army of the Potomac as early as practicable. It is believed that during the next few days several conflicts will take place, both south and west, which may attract the enemy's attention particularly to those points.

H. W. HALLECK,
General-in-Chief.

Hooker was influenced, moreover, to initiate operations at an early date by the thought that he had in his army a number of regiments enlisted, some for two years and others for nine months, mostly from New York State, whose time would be up in the course of the spring. It was important that the services of these men should be utilized before the time when they would have to be sent home to be mustered out, for they were entitled to be mustered out at the place where they were mustered in.

Concerning a general plan of operations, he realized that it was impossible to assail the enemy in front. The mere passage of the river presented no serious difficulty, for Lee, adhering to his usual policy, invited rather than threatened that operation; but his line of intrenchments, stretching along the sides of the crest of the heights, was in plain view, and the hopelessness of attacking it was a conviction in the mind of even the privates in the ranks. The enemy could then be assailed only by turning his position. The river increased so rapidly in width that to cross it below Port Royal, where Lee's right rested (Map 1, sheet A), would require 1000 feet of bridging, and the pontoon trains and artillery must march 20 miles over a broken and wooded country by roads of clayey mud. The march of an army under such conditions would be extremely slow. Lee's spy system was so efficient that the movement could not be kept from him, and his intrenchments might be extended down the river to keep pace with it. Furthermore, a movement of the army in this direction would uncover Washington.

Above Fredericksburg the roads were comparatively firm and of easy grade, and the rivers narrower. A movement in this direction need not uncover Washington, unless, on account of the precautions taken by the enemy to prevent it, such a movement would have to be much more extensive than one below.

About $2\frac{1}{2}$ miles above Fredericksburg, as one ascends the river, the bluffs on each side of the Rappahannock close in upon it. They rise about 150 feet above the water, the right bank attaining a somewhat greater height than the left. Their slopes are generally well wooded, very steep, and deeply cut by

ravines. Good ground for approaching the river from either side first presents itself at Banks' Ford. Here a foothold on the opposite hills gives command of the enemy's line. This important point was guarded by Wilcox's brigade and Penick's battery of Anderson's division, and presumably could not be surprised. Owing to the bend in the river, it is twice as far from the Federal position as it is from the Confederate, and, moreover, is just now impassable.

The next point that offers a practicable approach is United States Ford. Here, also, the river was at this time unfordable; the approach, moreover, was covered by long lines of works, to be manned whenever necessary by troops of Mahone's and Posey's brigades of Anderson's division, camped near by. Just above United States Ford is the junction of the Rapidan with the Rappahannock. Any attempt to turn the enemy's left above this point involves the passage of both streams, each of which is from 200 to 300 feet in width.

General Haupt was summoned from Washington to confer with Hooker. Describing the interview, Haupt says:

[Hooker] handed me a paper to read, saying that it contained his plan of operations, but I must not on any consideration open my lips to any living soul; that even the members of his staff did not know what his plans were, and would not know until the time arrived for putting them in execution; he had left them under the impression that a very different movement was contemplated. He added that when he did move he expected to advance very rapidly, and as he would depend upon me for his supplies, I had a very important duty to perform; that upon its performance success or failure might depend, and he had concluded to advise me fully, so that I might make the necessary preparations.⁹

Having read the paper, Haupt said that he would be ready. With this in view, he issued the following instructions, a copy of which was forwarded to Hooker:

WAR DEPARTMENT, U. S. MILITARY RAILROADS,
WASHINGTON, D. C., *March 26, 1863.*

A. ANDERSON, ESQ., Chief Engineer Military Railroads of Virginia.

Sir: You will take measures to have everything in readiness to meet the wishes and second the movements of the commander of the Army of the Potomac, sparing no labor or necessary expense to secure the most effective action when called upon, and to provide the materials and men necessary for the purpose.

You will have a well-organized force of skilled men, complete in its appointments, and fully provided with every means and appliance to

⁹*Reminiscences of Gen. Herman Haupt*, p. 193.

facilitate the work it may have to do. You will apply to the commander of the army for such details of soldiers as you may want, and to the chief quartermaster for transportation of all kinds and forage for animals.

While endeavoring to consult a judicious economy in expenditures, avoid that false economy which is purchased at the expense of efficiency. When active forward operations are resumed, the all-important object will be to secure the reconstruction of roads and bridges and the re-opening of communications in the shortest possible time.

* * * * *

Very respectfully,

H. HAUPT,

Chief of Construction and Transportation, U. S. Mil. R. R.

General Haupt had a profile of the line from Fredericksburg to Richmond, and knew the dimensions of all the bridges on it. He had a large number of bridge trusses prepared in spans of 60 feet to be transported on flat cars, hauled from the cars by oxen to the sites of the bridges, and hoisted bodily into position by suitable machinery.¹⁰

The prospect of active operations occasioned, too, the following communication of the 31st instant from Comstock to Butterfield:

In case a siege of Richmond is deemed among the possibilities of the coming campaign, I think the chief quartermaster should be notified that he may be called on to furnish on our arrival in front of Richmond 10,000 shovels, 5000 picks, 5000 axes and 2000 shingling hatchets; that the Engineer Department should hold in readiness 30,000 sand-bags; and the secret service should, if possible, obtain authentic maps of the defenses of Richmond, either through their agents or by the public offer of large rewards. Such maps would be of no less value in case of an assault than in case of a siege. In the first case they would save valuable time that would otherwise be spent in selecting the proper point of attack, or might indicate at once that point. Such maps are undoubtedly in existence. Copies or originals may perhaps be obtained. It is believed to be impossible to compile such maps here from information given by persons who enter our lines, so as to obtain with sufficient accuracy either the strength of the works or the character of the ground around them.¹¹

The following day, April 2d, Hooker wrote to Stanton:

I send you our last advices from Richmond. The papers contained but little news. Lieutenant-General Longstreet [himself] was on the opposite side of the river night before last. It is reported that his command is returning. * * * Why is not the Second Regiment New Hampshire Volunteers on its way back?¹²

¹⁰*Reminiscences of Gen. Herman Haupt*, p. 178.

¹¹*W. R.*, 107, p. 999.

¹²The 2 N. H. had been furloughed to go home and carry an election for the Republican party. It did not return until after the campaign (*Hist. of the 2d Regiment of N. H. Vol. Infantry*, by M. A. Haynes, pp. 152, 153).

It looked as if the IX Corps was not a sufficient attraction to keep Longstreet away from Lee. But the following letter from Peck, dated April 4, put a new face on the matter:

* * * My information from various sources has been that Longstreet had within 20 or 30 miles of this place [Suffolk] 15,000 [men], and 15,000 along the railway this side of Petersburg, which he could concentrate [at an intermediate point] in 12 hours, and I was advised from headquarters [Fort Monroe] a few days since that one of our spies had a list of the regiments and the strength, and they amounted to 28,000. * * *

Ever since my arrival the enemy has been impressed with the idea that an army [Federal] would attempt this route, and they have watched very closely.¹³

The expectations expressed in the following letter of Lieut. Henry Ropes, Twentieth Massachusetts Volunteers, dated March 31st, were perhaps shared by a large portion of the Army of the Potomac:

* * * it appears likely that our corps [II] will remain to cover this front and conceal our movement from the enemy, in whatever direction the army goes. * * * It seems to be the general opinion that he [Hooker] will move secretly down the river, cross, say, 40 miles below, under cover of the gunboats, and move on the enemy's communications with Richmond. * * *¹⁴

The following representations were doubtless received at Hooker's headquarters in the course of the next few days:

Keyes to Halleck, April 8. H. A. Gibbon, a deserter from the Fifty-seventh Regiment, North Carolina [2. 3. II], * * * states that Lee has collected large pontoon trains, and is ready to cross the Rappahannock;¹⁵ that he will attack Hooker soon, if Hooker does not attack; that Lee's army is 80,000 strong, all well armed, and mostly with Enfield rifles. The men are in good condition, and feel entire confidence that they will beat Hooker. * * *

Brigadier-General Pleasonton, First Cavalry Division, to Assistant Secretary of War, April 10. 1. The rebel force on the Rappahannock

¹³The *Richmond Enquirer* of March 25, discussing the strategic deployment of the Federal armies, said: "Another great army is now threatening our communications, distributed between Suffolk in Virginia, and New Berne in North Carolina; it may amount in the whole to 60,000 men; and is intended to take possession of the railroad somewhere between Goldsboro and the Virginia line, thus cutting our communication with a great part of the Confederacy." Goldsboro and New Berne are south of Weldon and nearer the coast. They are not shown on the map.

¹⁴I shall take occasion again to quote from this young officer's letters home, using the manuscript copies deposited in the library of the Military Historical Society of Massachusetts, by John C. Ropes, Esq., of Boston, the founder of the society and distinguished military historian, and a brother of Lieutenant Ropes. The II Corps sustained a heavier loss than any other at the Battle of Fredericksburg, December 13, 1862. J. B., Jr.

¹⁵This statement appears to be an error. The author can find no evidence of Lee's having the material for a pontoon bridge that would span the Rappahannock.

has not been diminished. Two divisions of Longstreet's troops [Hood's and Pickett's] have returned to Fredericksburg.¹⁶

2. The rebels are fortifying the fords of the Rapidan *in the vicinity of Rapidan Station*, and intend to fight on that stream *in that vicinity* and at Fredericksburg.

3. There are no works or troops on the railroad from Culpeper to within 3 miles of Richmond. All the heights around Richmond are fortified. * * *

5. * * * There is much suffering among the citizens in the south, but the soldiers are well supplied, and are in good health and spirits. Everybody has been conscripted. The troops have 22 ounces per day of flour, one-fourth pound of meat, with some sugar and rice occasionally.¹⁷

The strength attributed to Lee's army in the first of these dispatches was about 30 per cent. in excess of the actual number. A truer estimate of it was given in a project for a passage of the Rappahannock below Fredericksburg prepared by Captain Comstock, and presented to Hooker on the 12th: "It is assumed," said Comstock, "that the force of the enemy within 15 miles [a day's march] of Fredericksburg is probably 40,000 men, and does not exceed 60,000."¹⁸

Comstock's estimate of Lee's numbers, say 50,000, is from 15 to 20 per cent. too small. It may be assumed that, balancing the various estimates afforded him, Hooker had a pretty correct idea of the strength of Lee's army.

On the south side of the Rappahannock the planning for a general movement looked less to the offensive than to the defensive. In answer to two letters from General Trimble proposing an attempt in force on the Federal camp at Falmouth, Lee wrote on the 8th of March:

* * * I know the pleasure experienced in shaping campaigns and battles according to our wishes, and have enjoyed the ease with which obstacles to their accomplishment (in effigy) can be overcome. The movements you suggest in both letters have been at various times studied, canvassed with those who would be engaged in their execution, but no practicable solution of the difficulties to be overcome has yet been reasonably reached. The weather, roads, streams, provisions, transportation, etc., are all powerful elements in the calculation, as you know.

* * * The idea of securing the provisions, wagons, guns, of the enemy is truly tempting, and the desire has haunted me since December. Personally I would run any risk for their attainment, but I cannot jeopardize this army.

I consider it impossible to throw a trestle bridge over the Rappahannock below the Rapidan, with a view to a surprise. Our first appear-

¹⁶These divisions had not returned. J. B., Jr.

¹⁷These particulars may have been true as to the other Confederate armies. In Lee's army the ration of flour was 18 ounces (Lee to Seddon, March 27, *ante*).

¹⁸W. R., 107, p. 1003.

ance at any point would be the signal for the concentration of their army, and their superior artillery would render its accomplishment impossible without great loss of life. A bridge might be thrown over the Rapidan above the Germanna Mills, and has been contemplated. Our movements might be concealed until we crossed the Rappahannock, but the distance from there to Aquia is great; no forage in the country; everything would have to be hauled. The route by Orange and Alexandria Railroad is the most feasible. The bridge is passable at Rappahannock Station. We must talk about it some time.

On the 12th he wrote to Stuart:

* * * I have written to W. H. F. Lee [commanding cavalry below Port Royal] to be prepared to move at short notice, and to select one regiment to remain in that section. * * * I will send Captain Johnson [of the Engineers] up to Rapidan Station [Map 1, sheet A] to see if rifle-pits can be constructed there to protect the bridge. I think it probable that a dash may be made at it to destroy it, in connection with other movements. What can you put there to guard it?

* * * * *

The information from Falmouth is that the enemy will, as soon as roads permit, cross at *United States Ford, Falmouth, and some point below*, the attempt at Falmouth to be a feint. * * *

I have told Johnson to throw up some works at Gordonsville, so that Major Boyle's men [posted there] might make a stand against cavalry.¹⁹

Under acts of the Virginia legislature, application was made by the chief of the Engineer Bureau at Richmond, to the Secretary of War, for 2832 slaves to labor on the fortifications and complete them "within the time desired by General Lee."²⁰

On the 16th of March, Lee wrote to Longstreet:

* * * I am led to believe that none of the army of General Hooker have left the vicinity of Aquia, except the corps of General Smith,²¹ which went to Newport News. It is also reported that it is General Hooker's intention to cross the river and advance as soon as the state of the roads will permit, and that in fact he has issued repeated orders to that effect. I am not fully informed as to their apparent intentions, strength, etc., on the south side of the James River, but we should be prepared to concentrate to meet him wherever he should advance in force. From present indications it is fair to presume that we shall be called upon to engage him first on the Rappahannock, and I desire you to be prepared for this movement, and make endeavors to keep yourself advised of the disposition and preparations of the enemy on our front for moving the troops recently detached from the First Corps [Confederate], or such of them or others as may be necessary in that direction.²²

Lee took the incursion of the Federal cavalry under Averell to be a preparation for a general advance of the Army of the

¹⁹The Italics are mine. J. B., Jr.

²⁰Gilmer to Seddon, March 4.

²¹IX Corps. It left the Army of the Potomac for Newport News on the 10th of February, commanded by Maj.-Gen. W. F. Smith.

²²H. R., 26, pp. 921, 922.

Potomac; by a letter to Longstreet, dated 10:30 P. M. the 17th, he ordered Hood's and Pickett's divisions to return to Fredricksburg. Longstreet replied under date of the 18th:

I do not think it would be well to draw off any portion of Pickett's division at present. All of it can not well be taken from here as long as the enemy heads this force of his so near Richmond.²³

On the same day Lee learned that the Federal cavalry had recrossed. He concluded that he had mistaken the character of the enemy's operation, and telegraphed the Adjutant-General at Richmond:

Please detain Hood's and Pickett's divisions until further notice. No infantry of enemy reported to be crossing. Cavalry retiring. Stuart pursuing. Divisions can either resume former or take more convenient positions. No more troops needed here.

Mahone's and Posey's brigades of Anderson's division ($\frac{1.2}{1.1}$), both under command of Mahone, were posted to dispute the passage of the Rappahannock. At United States Ford a detail of 120 men was made from the two brigades to report to Captain Collins, Chief Engineer of Gen. J. E. B. Stuart's staff, at Germanna Ford, on the Rapidan River, for the purpose of rebuilding a bridge across the river at that point. The double object of this work was to improve the communication between Lee's army and Stuart's cavalry and horse artillery at Culpeper Court-House; and to facilitate a raid which Stuart was contemplating upon the Federal depots at Falmouth.²⁴

On the 17th, the day of the battle of Kelley's Ford, Anderson wrote to Mahone:

GENERAL: I wish you to place the forces under your command in the best position for checking any attempt of the enemy to cross at United States Ford, to examine the river above and below you for some distance, and to ascertain whether any practicable ford exists. I have been informed that there is one, called the Blind Ford,²⁵ just below the junction of the rivers.

If your position can be strengthened, have all needful work done. Have the road repaired. Learn all that you can about United States Ford. This may be effected by inducing one of the enemy's cavalry picket to come over to exchange papers or to trade.²⁶

Let me have timely notice of any movement of the enemy. Keep

²³*W. R.*, 26, p. 924.

²⁴*Magazine of Am. Hist.*, XX, 378. This raid, it would seem, was to be made, as a sort of counter-offensive, when the Federal army should advance.

²⁵There seems to have been a ford by this name just above the junction of the rivers, but none for some distance below. J. B., Jr.

²⁶The following instruction was issued on the 27th of February, from Hooker's headquarters, relative to communication under flags of truce:

"Newspapers may be received; but not exchanged except under special approval from these Headquarters."

up communication with our cavalry picket at Ely's Ford, on the Rapidan.

On the 17th Longstreet wrote to Lee:

* * * I shall be ready to join you with Hood's division at any moment, and trust to your being able to hold the force in your front in check until I can join you.²⁷

One of the criticisms made since the war on the strategy of the Southern generals is that the Confederate Armies did not generally withdraw from their frontiers so as to realize the advantage of prolonging the Federal, while shortening the Confederate lines of communication. Whatever might be said for this maneuver in an inland country, as illustrated, for instance, in the campaign of Atlanta, it offered no such advantage on the coast. As the Federals commanded the sea, their army would supply itself, as Grant's did during the Wilderness campaign, from its transports and its advanced bases established therefrom. Hence in the plea which Longstreet now enters for a withdrawal from the Rappahannock, and Lee's answer thereto, there is no reference to the Federal communications.

Longstreet wrote to Lee on the 19th of March:

* * * It seems to me to be a matter of prime necessity with us to keep the enemy out of North Carolina in order that we may draw all the supplies there, and if we give him ground at all it would be better to do so from the Rappahannock. It is right, as you say, to concentrate and crush him; but will it be better to concentrate [first] upon his grand army rather than on his detachments, and then make a grand concentration on the grand army? If we draw off from the front of his grand army we ought to be able to crush rapidly his detachments, and at the same time hold the grand army in check as far back [from Richmond] as South Anna at least, particularly while the roads are so very bad, then concentrate on the grand army and try and dispose of that.²⁸

On the 24th he wrote informing Lee that certain counties of Virginia and North Carolina, containing abundant supplies for the Confederate Armies, were within the Federal lines, and representing that he could occupy these if he had another division of his corps.²⁹

Lee replied on the 27th:

You have about 40,000 effective men; the enemy can bring out no more.³⁰ I feel sure that with equal numbers you can go where you choose.

²⁷*W. R.*, 26, pp. 558, 562. Messages of similar import were sent on the 21st and 22d (*W. R.*, 26, pp. 926, 927, 933).

²⁸*W. R.*, 26, pp. 926, 927.

²⁹*W. R.*, 26, p. 944.

³⁰The Federals present for duty numbered: in Southern Virginia, under Dix, 24,031, and in North Carolina, under Foster, 14,671; total 38,703 (*W. R.*, 26, pp. 573, 576). Longstreet's command numbered at the end of February (*ante*) 43,239 present for duty.

The latter statement is striking evidence of Lee's belief in the superiority of the Confederate troops over the Federal. It is incomprehensible without an appreciation of Lee's readiness, with an equality of numbers, to trust to sheer valor for overcoming the advantages which inhere in the defensive. He went on to say:

If this army is further weakened we must retire to the line of the Annas,³¹ and trust to a battle near Richmond for the defense of the capital. It throws open a broad margin of our frontier and renders our railroad communications³² more hazardous and more difficult to secure. Unless, therefore, a retrograde movement becomes necessary, I deem it advantageous to keep the enemy at a distance and trust to striking him on his line of advance.

While not strong enough to attack Hooker in position, he might strike him an effective blow on the march. Recurring to Longstreet's situation, he added:

A sudden, vigorous attack on Suffolk would doubtless give you that place. Of the propriety of this step, you can best judge. * * * If operations in that quarter should draw reinforcements from General Hooker, more troops could be spared from this army.³³

Longstreet wrote back on the 17th:

* * * I think it utterly impossible for the enemy to move against your position until the roads are sufficiently dry for him to move around you and turn your position. By reinforcing here we might destroy the enemy and get our forces together again in time to resist him at the Rappahannock. But if we succeed in destroying him here and have to retire to the Annas before we can give him a general battle, we will accomplish a great deal and really have the enemy in a better position for our operations than the one he now occupies.³⁴

By this time the information which Lee had acquired from the skirmish at Hartwood Church* seemed no longer reliable. He was doubting again whether Hooker's army or only a fraction of it was in his front. On the 2d of April he wrote to President Davis:

* * * their lines are so closely guarded that it is difficult to penetrate them. Their pickets [mounted] are placed within sight of each other, with dismounted men in the intervals³⁵ * * * I have apprehended, from the jealous manner of guarding their lines and the systematic propagation of reports of an intended advance of their armies on the Rappahannock and Blackwater [south of the James River], that their object is to deceive us, and that they may, while intending

* Reconnaissance made by Fitzhugh Lee with a brigade of cavalry, February 25th.

³¹North and South Anna Rivers.

³²Virginia Central Railroad, Richmond and Danville Railroad, and South Side Railroad.

³³*W. R.*, 26, pp. 943, 944.

³⁴*W. R.*, 26, p. 950.

³⁵This is a mistake as to the pickets in general. J. B., Jr.

to act on the defensive, have reinforced other points for offensive operations, but I have no means of ascertaining the truth of my suspicions until we are able to make some aggressive movements. It was with this view that General Fitz Lee was ordered some time since to penetrate General Hooker's lines, and from his report I judge that his whole army was then in position.

Being on the defensive, Lee could afford to bide Hooker's time for commencing operations, but what if Hooker's objective were elsewhere? Lee must try to meet him or send aid to those who were to do so. Not knowing Hooker's designs, he replied to Longstreet on the 2d of April:

* * * unless General Hooker soon takes the aggressive I must endeavor to operate to draw him out.³⁶

But he had another reason for thinking of taking the offensive, or wishing that he could do so. Foreshadowing the campaign of Gettysburg, he wrote on the 9th to the Secretary of War:

Should General Hooker's army assume the defensive, the readiest method of relieving the pressure upon General Johnston³⁷ and General Beauregard³⁸ would be for this army to cross into Maryland. This can not be done, however, in the present condition of the roads, nor unless I can obtain a certain amount of provisions and suitable transportation. But this is what I would recommend, if practicable.

Longstreet, returning to the subject of withdrawing from the Rappahannock, wrote on the 3d:

* * * I have thought since about January 23d last (when I made the same suggestion to you) that one army corps could hold the line of the Rappahannock while the other was operating elsewhere.

I cannot now appreciate the necessity of your retiring to the Annas in case you send off more troops from the Rappahannock. There you are fortified on the river and on the heights; on the Annas you would have neither. Besides, you would lose *morale* and encourage the enemy.³⁹

On the other hand, according to Longstreet's message of the 30th ultimo, the enemy or the Annas would be in a better position for Lee's and Longstreet's operations than he was in on the Rappahannock. He added on the 4th:

I hope to be able to finish with the operations in this section in time to join you as soon as the roads are in condition for you to operate.⁴⁰

³⁶*W. R.*, 26, p. 954.

³⁷Commanding the Department of the West, which included a portion of western North Carolina and northern Georgia, the States of Tennessee, Alabama and Mississippi, and part of the State of Louisiana east of the Mississippi River (*W. R.*, 36, pp. 202, 203, 213).

³⁸Commanding Department of South Carolina.

³⁹*W. R.*, 26, p. 959.

⁴⁰*W. R.*, 26, p. 960.

Lee replied on the 6th:

* * * I cannot say whether General Hooker will advance or not, though, as before stated, all the information I receive from every source goes to show that it is his intention to do so, and that he is prepared. It may be a part of their general plan to deceive us while reinforcing their general armies; but as soon as I can move I will find out. In the meantime I do not think it prudent to weaken the force here.⁴¹

On the 7th Longstreet wrote to Lee:

I do not propose to do anything more than draw out the supplies from that country unless something very favorable should offer. * * * If I find that I can do no more than haul off supplies, I shall hurry one of my divisions [Hood's] back, so as to be within reach of you, unless the force is much stronger than you suppose it to be.⁴²

The remark: "I do not propose to do anything more than draw out the supplies," etc., was thrown out to excuse a possible failure in offensive operations.⁴³ General Longstreet had set his heart upon the investment and capture of Suffolk, for which he had a qualified approval from Lee.⁴⁴

The remark, "unless the force is much stronger than you suppose it to be," seems intended to make Lee responsible for the siege which Longstreet was then carrying on. Lee had only sanctioned "a sudden vigorous attack on Suffolk," and that only at the discretion of General Longstreet.

On the 6th of April, Lee wrote to his chief of artillery at Chesterfield Station that as soon as the roads were sufficiently improved, he might, with advantage, post the artillery "in part, if not the whole, about 3 miles west of Guiney's Station, where it would be about equidistant from Port Royal, Fredericksburg, and United States Mine Ford, *embracing the limits of the Rappahannock within which an attempt to cross by the enemy may be expected.*"

The italics are the author's. It is important to note this evidence of Lee's expectations as to Hooker's movements. On account of the bad condition of the roads, the artillery remained in its winter quarters until the campaign was fairly begun.

The unsatisfactory manner in which outpost duty was still performed and the habitual deportment of the Army of the Potomac on the march, together with the prospect of an early

⁴¹W. R., 26, p. 967.

⁴²W. R., 26, p. 970. For Longstreet to Seddon, April 6, see W. R., 26, p. 910.

⁴³*The Siege of Suffolk*, by Bvt. Brig.-Gen. Hagar Stevens (manuscript, Mil. Hist. Soc. of Mass.).

⁴⁴Lee to Longstreet, March 27 (*ante*).

resumption of operations, caused the following order to be issued on the 10th :

* * * * * * *

II. * * * Officers of outposts are expected to inform themselves accurately of all events transpiring in their vicinity, and those whose fears magnify trifling squads into large bodies of the enemy as richly deserve death as the base wretch who deserts his country's flag, or his comrades in battle. It has been too much a practice, upon outposts and battle-fields, to send back reports and calls for reinforcements, founded upon imagination or the tales of a frightened or cowardly shirk. The fate of battle may be changed by such reports.

* * * * * * *

III. Upon the march straggling must not be permitted. Corps commanders will take effectual measures to prevent it. Officers who fail to prevent it in their respective commands must be relieved and sent to the rear, and their names and the number of their regiments forwarded for publication in orders. Leaves of absence and furloughs must also be withheld from regiments in which straggling is tolerated. Drumhead court-martial, if necessary, can be held for the punishment of this class of offenders.

IV. Corps and division commanders, and assistant inspectors-general, should watch the conduct and behavior of officers and men on the march as well as in battle. Regiments not moving promptly as ordered, permitting straggling, or where the officers show a lack of capacity and zeal in pushing forward and overcoming obstacles, must be specially reported for such neglect, in addition to other measures that may be taken by commanders in such cases for the enforcement of discipline.

Three days later the following order was issued by General Stonewall Jackson for the government of his corps :

II. Each division will move precisely at the time indicated in the order of march, and if a division or brigade is not ready to move at that time, the next will proceed and take its place, even if a division should be separated thereby.

III. On the march, the troops are to have a rest of ten minutes each hour. The rate of march is not to exceed 1 mile in twenty-five minutes, unless otherwise specially ordered. The time of each division commander will be taken from that of the corps commander. When the troops are halted for the purpose of resting, arms will be stacked and ranks broken, and in no case during the march will the troops be allowed to break ranks without previously stacking arms.

IV. When any part of a battery or train is disabled on a march, the officer in charge must have it removed immediately from the road, so that no part of the command be impeded upon its march.

Batteries or trains must not stop in the line of march to water; when any part of a battery or train, from any cause, loses its place in the column, it must not pass any part of the column in regaining its place.

Company commanders will march at the rear of their respective companies; officers must be habitually occupied in seeing that orders

are strictly enforced; a day's march should be with them a day of labor; as much vigilance is required on the march as in camp.

* * * * * * *

V. All ambulances * * * will * * * follow in rear of their respective brigades. * * *

Any one leaving his appropriate duty, under pretext of taking care of the wounded, will be promptly arrested, and as soon as charges can be made out, they will be forwarded.

On the same day Hooker addressed the following circular to his corps commanders:

The major-general commanding directs that your command have packed in their knapsacks by to-morrow (Tuesday) night five days' rations of hard bread, coffee, sugar and salt.

That you have in readiness, so that it may be issued and cooked at short notice, three days' rations of pork or bacon, with hard bread, coffee and sugar, to be placed in the haversacks.

That your command have drawn before Wednesday morning [15th], and ready for the movement, five days' fresh beef on the hoof, making complete eight days' rations to be carried with the troops.

That each officer, by the use of his servant and his haversack, provide himself with eight days' rations.

That the small-arm ammunition to be carried will be 150⁴⁵ rounds—60 rounds on the person—the full complement of the pack-train, and the balance to be in the [wagon] train, ready to start first when the wagon-trains move.

The supply-trains will be in readiness for such movements as may be ordered.⁴⁶ Each teamster must have with him the forage for his own team.

The batteries will carry eight days' subsistence for the troops and their full capacity of forage, at least six days' grain, as much as possible on the guns.

The general hospital for those unable to move will be designated by the medical director, who will give all the necessary directions in the premises.

The surplus clothing of the troops, beyond the extra shirt, pair of socks and drawers [which each soldier is to take with him], should be stored under the supervision of the quartermaster's department.

Corps commanders will require every serviceable man to march with the column.⁴⁷

There was perhaps some encouragement for the Federal administration in a report which had reached Washington of a riot in Richmond. About 10 o'clock in the morning of April 2d, a crowd of about 4000 women collected in a park in front of the Capitol, and clamorously demanded bread for their starving

⁴⁵Changed by circular of 14th to 140 rounds.

⁴⁶It will be observed that the supplies to be loaded in these trains are not stated.

⁴⁷* * * the articles of clothing which each man was to carry were minutely specified. It was evident that in the move about to be made wagon-trains were to be kept out of the way of capture. The soldiers likewise gained the impression that more attention was being paid to the details of their necessities, and that their commanders knew just how much ought to be expected of them" (Goss, *Recollections of a Private*). The event is to prove that the commanders miscalculated what their men would carry. J. B., Jr.

families. President Davis appeared on the steps of the Capitol, and made a speech promising them money. They declared it worthless and drowned his voice with cries of "Bread!" "The Union!" "No more starvation!" etc. The crowd then proceeded to the general commissary depot, broke into it, and carried off a large quantity of stores. Davis remarked that such disgraceful affairs were worse than Union victories.⁴⁸ At the Confederate War Department the affair was thought serious enough to call for the following communications:

RICHMOND, *April 2, 1863.*

TO THE RICHMOND PRESS.

Gentlemen: The unfortunate disturbance which occurred to-day in this city is so liable to misconstruction and misrepresentation abroad that I am desired by the Secretary of War to make a special appeal to the editors and reporters of the press at Richmond and earnestly to request them to avoid all reference directly or indirectly to the affair. The reasons for this are so obvious that it is unnecessary to state them, and the Secretary indulges the hope that his own views in this connection will be approved by the press generally. Any other course must tend to embarrass our cause, and to encourage our enemies in their inhuman policy.

Very respectfully, etc.,

JNO. WITHERS, Asst. Adjt.-Gen.⁴⁹

RICHMOND, *April 2, 1863.*

W. S. MORRIS, ESQ.,

President Telegraph Company:

I am desired by the Secretary of War to request that you will permit nothing relative to the unfortunate disturbance which occurred in the city to-day to be sent over the telegraph lines in any direction for any purpose.

Very respectfully, etc.,

JNO. WITHERS, Asst. Adjt.-Gen.⁵⁰

The Richmond *Enquirer* of the 4th made light of the affair with a zeal and vigor which betokened disingenuousness. It said in part:⁵¹

A handful of prostitutes, professional thieves, Irish and Yankee hags, gallows-birds from all lands but our own, congregated in Richmond with a woman huckster at their head, who buys veal at the toll-gate for 100 and sells the same for 250 in the morning market, undertook the other day to put into private practice the principles of the commissary department. Swearing that they would have "goods at government prices," they broke open half-a-dozen shoe stores, hat stores and tobacco houses, and robbed them of everything but bread, which was just the thing they wanted least. * * *

⁴⁸*W. R.*, 107, p. 1002.

⁴⁹*W. R.*, 26, p. 958.

⁵⁰*ib.*

⁵¹Referring to these disturbances, General Pleasonton wrote to the Assistant Secretary of War (dispatch of April 10 previously quoted): "The bread riots in Richmond were gotten up by Union men, of whom there are as many as ever."

MACHINE GUNS WITH CAVALRY.*

TRANSLATED BY SECOND LIEUT. E. L. GRISELL, EIGHTH CAVALRY.



ALL that touches upon the tactical employment of machine guns is of importance, and one should not neglect any opportunity to profit by the experience acquired by those officers who have had the good fortune to serve with them in war.

During the Russo-Japanese War, Colonel von Bunting, who commanded the Second Daghestan Cavalry Regiment, took it upon himself to attach to it two Maxim machine guns. And he also organized for his regiment a pack section with those two pieces, which rendered most excellent services on every occasion during the war.

It is therefore interesting to offer to our readers an article the colonel has contributed to the "Rousski Invalid," on the employment of machine guns by cavalry.

We point out, at the outset, the fact that in the Russian cavalry the machine guns are packed and the personnel mounted. Let the words of the colonel of the Daghestan regiment tell the story.

* * * * *

Russia is introducing into the cavalry organizations machine gun detachments, and rightly too. If that arm is introduced by an able hand in our cavalry, and if account is taken of the lesson of the last war, our army will have realized, in the preparation for war, a long and decisive step.

The German Army has already introduced machine guns in its infantry and cavalry (168 pieces).† It is the same in Austria-Hungary, although in that country the cavalry seem parsimoniously treated (only three machine gun detachments at present).

*From *La France Militaire* for September 23, 1909.

†In reality in Germany machine-gun detachments are not organically attached to cavalry corps; they are attached to infantry corps. But more habitually the seventeen mounted detachments capable of rapid movements are attached to cavalry in the maneuvers. Besides, there are already about forty machine-gun companies of six pieces organized to act in conjunction with infantry.—Editor *La France Militaire*.

We have a large number of machine guns, and we have on the subject of their employment a certain experience in war which shows that the cavalry ought to be largely furnished with this new arm. In spite of this fact that the machine guns have been considered only for the infantry.

It is the duty of officers, who had occasion to serve with machine guns in the last war, to give public expression of their opinion on the employment of that arm for the cavalry, on the manner in which the cavalry machine gun detachments should be organized, and how they ought to be supplied with munitions in order to carry out their full object.

In the infantry machine guns give a powerful fire reinforcement; in the cavalry they may be the firing power. In consequence of this view, cavalry ought to be furnished with machine guns. In future wars cavalry, much more frequently than formerly, will be drawn into fire action, as our last war has already shown. The combat of cavalry against cavalry will take place as formerly, but that of cavalry against infantry certainly will have to be conducted in a different manner, if it is to be crowned with success. Also the cavalry must know how to go about it if it really wishes to be at the height of its mission, viz.: to take an efficient part in all combats until victory is gained. In fact, the charge will rarely be permissible, and only in cases of happy chance will it be successful; the cavalry should realize this fact. It should find also a large employment in raids, but there also final success only will be obtained by fighting on foot.

"We then ought to become mounted infantry?" ironically ask many cavalymen. The last war has shown clearly what the combat demands. The cavalry's rôle is not to ruin itself in useless charges, but to co-operate actively and efficiently to obtain the victory.

In the future the charge will find before it, without mentioning natural or artificial obstacles, a wall of lead so strong that it will break itself to pieces before it can be of any use for the common good. Cavalry raids ending in a fight on foot, either on the offensive or on the defensive, without doubt will become the principal field of action of cavalry in future wars. Machine guns in this case will be invaluable because they will enable the holding, even against infantry, of the conquered positions.

A railroad center, a defile, a bridge, a ford, a height in a good position, a position taking in flank a column of the enemy, not to speak of an action on the rear of an enemy to attack his

stores, convoys, etc., may be carried out with the aid of machine guns and inversely, attacks have great chances of success, thanks to them.

Accompanied by horse artillery and the machine guns properly belonging to it, the cavalry would become a universal arm, knowing no obstance, and so powerful that it would be truly criminal not to wish to aid it to reach this point of efficiency. But, for this, it is necessary to have good machine guns, first and second, to employ them in a judicious manner and with success.

Our cavalry has machine guns, but they are bad. There has been introduced among us the Madsen system, in spite of the favorable experiences had in the late war with the Maxim system. It is hard to conceive how this comes about.

The Madsen machine gun is used mounted on a small fork; the butt is at the shoulder of the firer who cannot support the recoil for more than a few seconds; the arm lacks a cooling device, so that the barrel becomes burning hot after from two to three hundred shots. The ammunition is brought up by means of loading strips which consume much time in loading, and this is the cause of regrettable interruptions in the fire. The accuracy of the fire depends upon the firer; it is poor and the dispersion is very great.

Therefore it is necessary that we give them the same gun as the infantry, the Maxim machine gun. The Madsen will still give good service for purposes of instruction and in the forts.

Another essential point is the permanent assignment of the machine-gun detachments to the cavalry. It is not only for a few weeks, but during the whole year that the cavalymen ought to operate with them. These detachments ought to take part in all the exercises and maneuvers of the cavalry so that they will not be known to a few officers only, and that all will understand them and know how to employ them, from the chiefs of platoons and squadron commanders to the generals of division. Only the habit of working constantly with machine guns, of putting them in position and of employing them properly will put the officers of cavalry in a condition to make a judicious and efficient use of them in time of war.

The cavalry should be exercised often in dismounting for fire action so that it will know how to combine the action of the

firing line with that of the machine guns. This can be obtained only by many exercises.

The machine-gun detachments should be better endowed in personnel also. They lack a reserve personnel, which is absolutely indispensable. If one can place "hors de combat" only a small number of men, he renders the whole detachment incapable of fighting. It is necessary to give the second supply echelon a two-wheeled cart for cartridges, for the consumption of ammunition is usually very great and the renewing of the supply is not sufficiently assured now.

Concerning the employment of machine guns, every cavalry commander should not lose sight, beyond all, of the following points: *First*, the machine gun is an arm of close combat, of which the effecting radius of action is not more than 1200 meters (1312 yards); *Second*, the machine gun is always particularly effective and therefore dangerous to the enemy, when it can open fire by surprise; it therefore hunts cover, takes a defiladed position when it is possible; masked fire is of great importance. Its crack gives birth to an instinctive and paralyzing fear among the enemy. But on the other hand, if it is uncovered prematurely it will draw on itself all the enemy's fire and quickly will be put out of action.

Now, I am going to give as examples the more important cases in which the machine guns of the Second Daghestan Regiment of Cavalry were employed in the late war.

1. Protection of two squadrons in recrossing the Taitseho, after a reconnaissance on the south bank, under the pressure of the enemy's infantry. There was no bridge.

Two other squadrons with two (2) machine guns occupied the north bank and, by its lively fire, made it possible for the two squadrons to retreat with relatively small outposts. August 26, 1904.

2. Two machine guns effectively covered the flank of the regiment marching in a mountain valley close to two Japanese companies. September 1, 1904.

3. Two machine guns successfully supported two squadrons in a reconnaissance of the enemy's forces at the hill of Dalin. September 14-18, 1904.

4. Two dismounted squadrons and a company and a half of the Morchansk regiment, efficiently supported by two machine guns, stopped the advance of three times as many of the enemy from 7.00 to 10.30 A. M., September 20, 1904, and so permitted

Major-General Peterov to beat the enemy and chase him from the hill.

5. Two machine guns caught under their fire a railroad train which was bringing up troops of the enemy during the raid on Inkeon.

6. The effective fire of two machine guns on the firing line of a dismounted regiment against columns of the enemy coming from the southeast during the battle of Sandepon, January 25-26, 1905.

7. The defense by our dismounted squadrons and two machine guns, of the village of Choumachoulintsa, abandoned by our infantry, January 27-28, 1905. The village was held for two days, which gave the infantry time to withdraw and occupy a second line of defense. The village at one time was even under the fire of the enemy's artillery.

Besides the above particularly typical cases, the machine guns of the regiment frequently entered into action.

Finally, we will express the hope and desire that our cavalry may be able to appreciate the value of machine guns, and that it may love them and learn what a valuable support their fire may become to the cavalry. Our cavalry, while appreciating the value of fire, will not on that account abstain from doing its best in vigorous charges against the weak point of the enemy, and it will look without ceasing to discover when circumstances demand it; its sense of duty and its honor guarantee this. But that intelligent cavalry will acquire with joy the new efficient arm, the machine gun, and it will be used to an energetic and productive extent for the glory and good of the Fatherland.

To resume the lessons of Colonel von Bunting's article, we will offer the following principles which flow from it:

The machine rifle is not sufficient for cavalry, a true machine gun is necessary.

The machine gun detachments of cavalry ought to belong to it entirely. They are transported by pack train and the personnel is mounted; but it is necessary to give them an ammunition caisson on wheels, which will march with the fighting train, in order to assure the replenishment of ammunition.

The personnel should be slightly increased in order to fill up the vacancies caused by the fire of the enemy.

The machine gun, joined with horse artillery, enables the cavalry to undertake missions of any kind; and, the case demanding it, to attack boldly the enemy's infantry, without fear.

The cavalry, in the course of its strategic missions, more often will have to fight with fire action. It ought to know and use its machine guns under most variable conditions, on the offensive as well as on the defensive.

Machine guns ought to act by surprise, and wherever possible, at short ranges. If they are uncovered prematurely, they will draw the fire of the enemy and be demolished before they can be of any use.

Finally, and it is an essential point, the greatest employment of fire combat should not cause the cavalry to lose sight of the fact that its essential part, the noblest and most productive, remains always the mounted charge, every time that circumstances permit or demand it.

TRANSLATOR'S NOTE.—As I understand the principles of the use of machine guns in our service, they are practically the same as those expressed in the above article.

The article shows that our system of dismounted action by cavalry is beginning to find favor in Europe, a practical admission by them that our system is the better. In other respects the article, besides corroborating our belief in the employment of machine guns, is only an interesting recapitulation of the views and principles entertained by our army.



THE GRAND ITALIAN ARMY MANEUVERS OF 1909.

TRANSLATED BY CAPTAIN W. H. PAINE, SEVENTH CAVALRY, FOR THE
SECOND SECTION GENERAL STAFF.*



DURING the day and night of August 28th, the Blue Army Corps accomplished its concentration upon the Oglio, having the Sixth Bersaglieri Regiment at Asola, the Seventh Division at Gabbioneta and Binanuovo, and the Mixed Division, united by railroad at Piadena and Isola Dovarese.

Therefore the location of the troops of the two sides was in general as follows:

THE BLUE FORCES.

The Cavalry Division and the Sixth Bersaglieri at Asola.

The Seventh Division at Gabbioneta and Binanuovo.

The Mixed Division at Piadena and Isola Dovarese.

The Bergamo Brigade at Garvardo.

The Garrison of Brescia.

THE RED FORCES.

The Cavalry Division near Castiglione delle Stiviere.

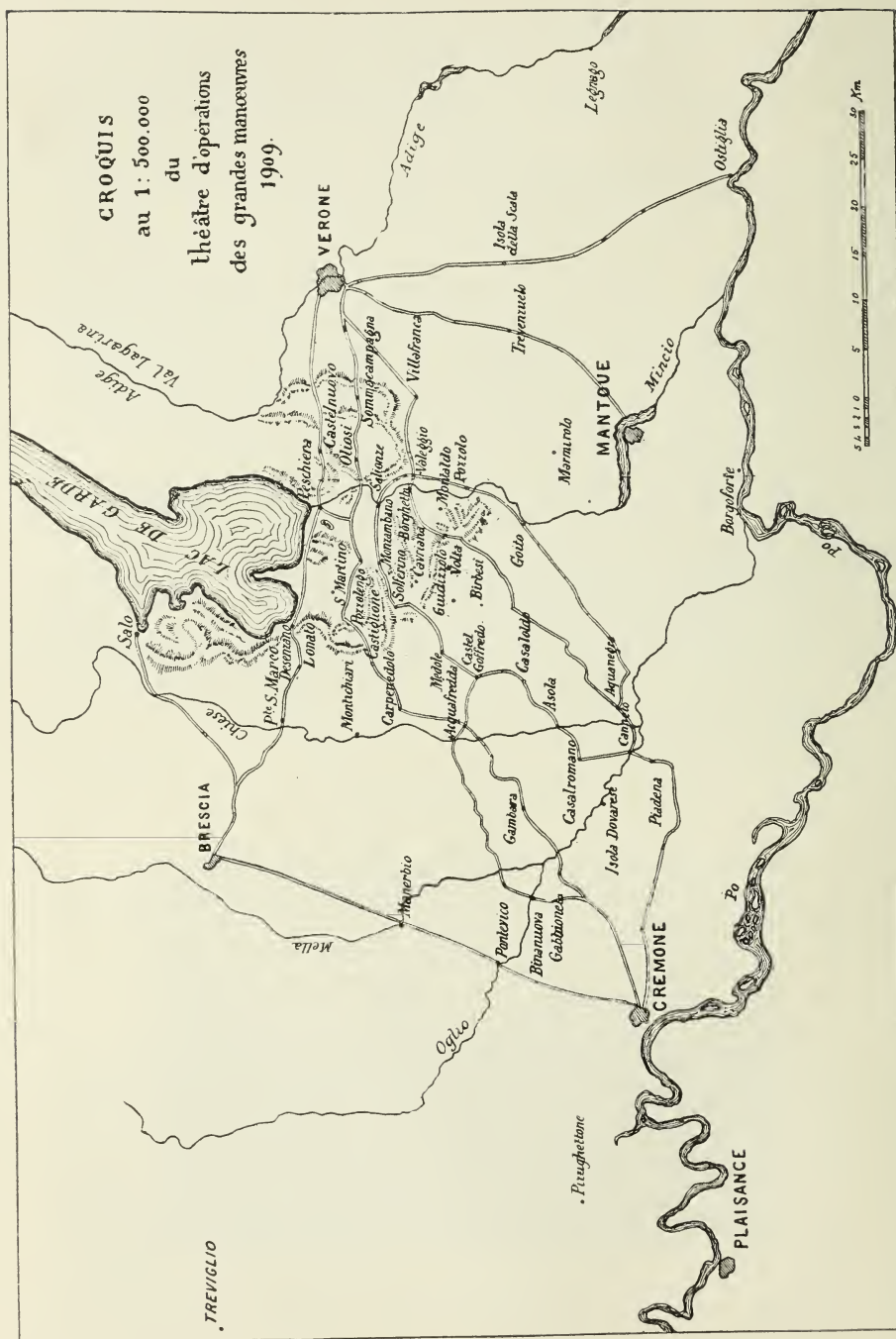
The Fifth Army Corps in the vicinity of Peschiera with detachments on the hills of the Garda.

ORDERS FOR THE DAY OF AUGUST 28TH.

The commander of the Red Army Corps resolved to transfer his troops to the right bank of the Mincio and to occupy the eastern edge of the Garda hills, and there in a good intrenched position to offer battle to the enemy who had been reported south of Oglio. However, not being able to foresee the direction from which the attack might be delivered, he contented himself for the time being by occupying the center of the arc of this position, sending out reconnoitering detachments along the arc itself. Accordingly on August 28th he ordered the march to be taken in three columns. The Tenth Division on the right was to move upon Castellaro. The Ninth Division on the left was to march on Busacchetti. The additional troops in the center were to go to Sant' Anna, and detachments were directed upon Castiglione, Cavriana and

*Continued from May JOURNAL.

CROQUIS
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du
théâtre d'opérations
des grandes manœuvres
1909.



Volta. He also ordered that the Cavalry Division should continue to protect the left flank and to harass the movements of the enemy.

The commander of the Blue Army Corps, with the intention of making a rapid march towards the enemy, proposed to reach the line Casaloldo-Remedello-Isorella with the troops which were already in hand. He therefore ordered the march to be made in four columns, the heads of which were to cross the Oglio at 4.00 A. M., August 28th. The Mixed Division was to move on the road through Piadena, Caneto, Acquaneгра, Mariana and on that through Isola Dovarese, Asola, and Casaloldo. The Seventh Division was to take the roads Gabbioneta and Remedello di sopra and that through Binanuova and Isorella. The Sixth Bersaglieri Regiment was ordered to remain at Asola, where it was to be joined by the artillery of the additional troops. One battalion was ordered to Casalmore for the purpose of connecting up the outposts of the two divisions.

OPERATIONS FOR THE DAY OF AUGUST 28TH.

The Red Army Corps effected its march upon the hills of the Garda without incident. The Tenth Division occupied a position to the south of the Redone in the vicinity of Mozambano and Castellaro, and the Ninth Division from the east of Peschiera through Salizone, where a military bridge was constructed, and thence to Busacchetti. The additional troops were at Sant' Anna.

As to the Blue force, great ardor was displayed by it in toiling through the night for the accomplishment of the orders which it had received. But a notification was received stating that in accordance with instructions from superior authority, the Seventh and Mixed Divisions were not to be moved during the night of the 28th. However, by reason of an error in the transmission of the telegram, the Seventh Division did move some distance toward the objective which had been assigned to it, but the Mixed Division remained in its resting-place.

The Blue Cavalry Division, after making a long detour by way of Calvisano and Carpenedolo, arrived in the vicinity of Medole, where there had taken place several encounters with reconnoitering parties of the opposing cavalry division. The latter, in the meantime, finding that Asola was defended by only a few Blue troops, the Sixth Bersaglieri, two squadrons of cavalry and one battery, made an attack upon it, effecting something of a surprise and compelling the Blue force to retire. The commander of the Blue Army Corps learned of this event, which threatened to separate the Seventh Division from the Mixed, and he thereupon entrusted to the latter division the task of uniting with the Sixth Bersaglieri Regiment toward Casalromano and then recapturing Asola.

At evening the location of the forces was in general as follows:

THE BLUE FORCES.

The Cavalry Division between Carpenedolo, Medole and Castiglione.
The Seventh Division on the left of the Oglio, near Praboino and Gambarà.

The Mixed Division at Piadena and Isola Dovarese.

The additional troops near Casalromano.

The garrison of Brescia which had been joined by the Bergamo Brigade.

THE RED FORCES.

The Cavalry Division at Asola and Casaloldo, with the Bicyclists at Acquanegra.

The Ninth Division at Busacchetti.

The Tenth Division at Castellaro.

The additional troops at S. Anna.

Detachments consisting of one battalion and a battery at Solferino, Cavriana and Volta.

ORDERS FOR THE DAY OF AUGUST 29TH.

The commander of the Red Army Corps issued orders that the southern edges of the Garda hills should be prepared for defense.

The commander of the Blue Army Corps gave orders for occupying the line Gazzoldo-Piubega with the Mixed Division and continuing on to Casaloldo and Castelgoffredo with the Seventh Division. The Sixth Bersaglieri was to remain at Asola with the special troops, equipage and trains of the Army Corps. The garrison of Brescia was to be transferred to Ponte S. Marco, where it was to intrench itself.

The commander of the Mixed Division, who had been charged with the task of uniting with the Sixth Bersaglieri for the purpose of recapturing Asola, accordingly directed the Cremona Brigade to march to that place and with the assistance of the Bersaglieri Regiment, and also if necessary, with the aid of the Pistoia Brigade, to drive out the Red forces which were in possession. The Pistoia Brigade was, in the meantime, to gain possession of the bridge at Bizzolano, now held by the Red forces, and after that to move on to Acquanegra, where it was to wait and to take up the march again when the Cremona Brigade should have affected the capture of Asola.

OPERATIONS OF THE DAY OF AUGUST 29TH.

The Red troops entrenched themselves upon the hills of Solferino, Cavriana and Volta. One brigade of the Red Cavalry Division marched toward Goito while the other remained at Asola. The latter was attacked by the Cremona Brigade and the Sixth Bersaglieri and forced to abandon the place. During its retreat it encountered the Blue Cavalry Division, and on account of its sudden losses and the fatigue of the horses, which had

been continuously in movement for two days, it was ruled that the brigade must retire upon Goito, where it rejoined the other brigade of the division.

On the preceding evening, the Red Bicyclist Battalion had partially destroyed the bridge over the Chiese at Bizzolano. It now accompanied the Cavalry Division, making several attempts at offensive returns.

The Pistoia Brigade of the Mixed Division of the Blue Army Corps had during the night sent a battalion and the sappers of the Thirty-fifth Infantry to repair the damaged bridge.

The Red Bicyclists made various attempts to disturb this work, but they were driven away.

It was not until toward evening that the troops of the Mixed Army Corps succeeded in reaching the objective which had been assigned to them, because they had been continuously harassed while on their march by both large and small parties of cavalry from the Red Cavalry Division.

At the hour for the suspension of the maneuvers the situation of the different troops was in substance as follows:

THE BLUE FORCES.

The Cavalry Division toward Montichiari, Carpenedolo and Castiglione.

The Seventh Division at Castelfreddo and Casaloldo.

The Mixed Division at Piubega and Gazzoldo.

The additional troops at Asola.

The Bergamo Brigade near Ponte S. Marco.

THE RED FORCES.

The Cavalry Division toward Cerlongo with the batteries and the Bicyclists at Goito.

The Fifth Army Corps on the hills of Castellaro, S. Anna and Busacchetti, with detachments of one battalion and one battery at Solferino, Cavriana and Volta, and with still other small parties guarding the bridges over the Mincio.

From noon of August 29th until 6.00 P. M. of August 30th, it was ordered by the directors of the maneuvers that there should be absolute rest for all the troops.

ORDERS FOR AUGUST 30TH AND 31ST.

The Red force was to await its adversary in its intrenched position. The Cavalry Division was to guard the left flank retiring eventually upon Valeggio. The bridges at Goito and Pozzolo were to be destroyed and the intervals were to be guarded by small parties of Bicyclists.

It was the intention of the commander of the Blue Army Corps to make an attack on the left of the enemy's position, also engaging his right at the same time, and he hoped by penetrating between Cavriana and the Mincio to separate the enemy from the bridges at Valeggio, Mozambano, Salionze and Peschiera. The primary objectives were to be Volta and Mantovana. In order to approach the positions of the enemy he ordered all the troops to be placed in motion at 6.00 P. M., August 30th, for the purpose of gaining the line Goito-Vasto-Birbesi, while the additional troops and the bicyclists were to be held in reserve at Ceresara. A light column consisting of three squadrons, two battalions of infantry without knapsacks, and one battery, was to precede the other troops to the bridge of Goito with the hope of effecting a surprise. It was forbidden to light fires, and the troops remained cold in the locations which had been assigned to them. On August 31st they were to advance to the attack against the enemy in his positions, this with the aid of the Cavalry Division and the Bergamo Brigade.

Operations from 6.00 P. M., August 30th until noon of August 31st. The engagement at Volta.

During the evening of August 30th the Blue forces moved without being disturbed to the positions assigned to them. Therefore their situation then became as follows:

The Mixed Division.—The light column consisting of three squadrons of the Guide Regiment of Cavalry, one battery, and two battalions from the Pistoia Brigade was at Goito, having found the bridge at that place destroyed.

The Pistoia Brigade with the artillery was at Val di Burato. The Cremona Brigade was to the southeast of Cerlungo.

The Seventh Division.—The Valtellina Brigade with the artillery was at Vasto di Sopra.

The Forlì Brigade was at Le Colombare.

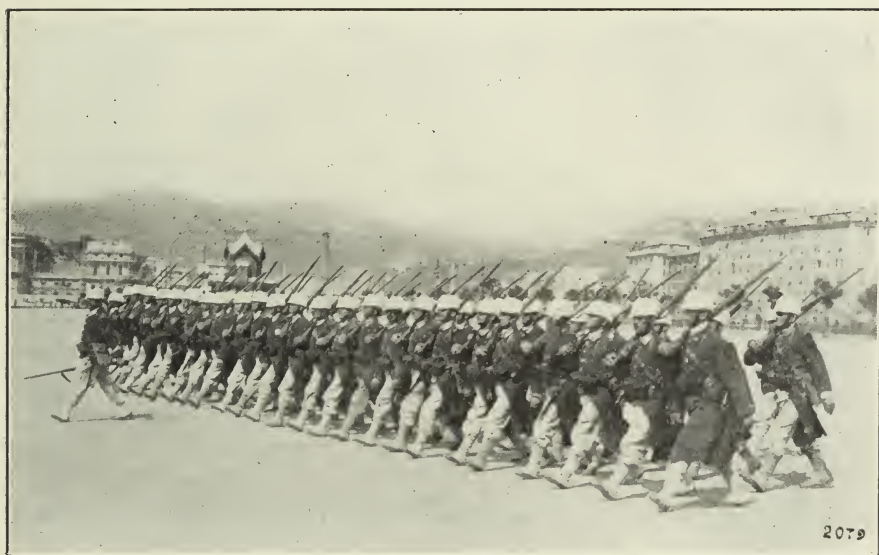
The additional troops and the bicyclists were at Ceresara.

The commander of the Red Army Corps received information of the movements of the enemy and he caused the Ninth Division to occupy the Volta hill and the Tenth Division the Cavriana hill, holding the additional troops in reserve in a central position, with the exception of the Salluzzo Cavalry Regiment, which had previously been sent out for observation and reconnaissance.

At 4.00 A. M., August 31st, the Blue forces began their advance to the attack. The Red Cavalry Division endeavored

to delay the advance, but having become subjected to rifle fire and to a counter attack from the Blue Cavalry Division, was retired toward Valeggio. In order to relieve the right flank of the deployed Army Corps from the danger to which it was now exposed, the V. E. Lancer Regiment was relieved from the duty which had been assigned to it in the protection of the left flank and directed upon Pozzolengo and Lonato, where several encounters had taken place with the hostile cavalry division, which finally fell back on Castiglione.

The terrain which the Blue infantry was obliged to cross under the fire of the hostile batteries consisted of a gently



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undulating plain, which was for the most part bare, especially toward its eastern side; stony, barren, without tactical advantages for the attacking force, without cover or shelter, and without obstacles. The nature of the soil was not favorable to the construction of hasty intrenchments and it was not practicable to remain there after the batteries of the adversary had established their range and opened fire. It was difficult here to advance or to execute any movements without strewing the ground with the bodies of the killed and wounded. The umpires were obliged to take all these circumstances into account.

The Blue Brigade on the extreme right of the line, which had the most open part of the plain in its front, attempted to partly intrench itself behind the banks of the Mincio, but it was harassed by the enemy's cavalry and by some small parties of Red Bicyclists which were finally checked upon the left bank of the Mincio, the result being that the brigade was only able to advance very slowly and this obliged the other brigade of the Mixed Division to keep down to the same slow pace.

In the meantime the Seventh Division supported by the Cavalry Division engaged the enemy so resolutely that presently the commander of the Red Army Corps conceived the idea of making a counter attack against it, doing this by advancing the Tenth Division, which formed his own right wing, and hoping in this way to drive the enemy back against the Mincio. The Bergamo Brigade of the Blue forces arrived on the battle-field at an opportune time, it having marched together with the Cadet Squadron from Calcinato to Dolferino the evening before. With this assistance the counter attack of the Red forces was repulsed.

However, the attack of the Blue forces did not meet with much better success. At the end of the day they found that they had gained very little ground toward the positions of their adversary. In brief, while their right was bent back upon Goito and Cerlongo, their left was at Guidizzolo and a little to the northeast of Medole, with the cavalry division at Medole and Castelfoffredo.

The Red forces had held their positions.

By reason of the fatigue of the troops, and possibly also in consideration of the fact that the losses which were ruled to have been met with during this hard day of fighting would not have made it practicable to have resumed the operations any earlier, the directors of the maneuvers ordered that hostilities should remain suspended until 4.00 A. M. the following day.

ORDERS FOR THE DAY OF SEPTEMBER 1ST.

The commander of the Blue Army Corps, having in mind the numerical superiority of his own force, resolved to again risk his fortune in a conflict. Being convinced that Volta was the key to the position of his enemy, he resolved to make his principal effort against that point. He consequently directed that the Army Corps should attack Volta, that the Sixth Bersaglieri Regiment should remain in reserve at Ceresara, and that the Bergamo Brigade should engage in a containing action against Cavriana. The Cavalry Division was to act from Medole to provide protection for the left flank.

The commander of the Red Army Corps, very probably on account of the appearance of the Blue Bergamo Brigade upon his right flank, and also in view of information which he had gathered indicating that several hostile battalions were then at Lonato and that the enemy's cavalry division was menacing his right flank and rear, adopted the plan of retiring within the stony amphitheater and establishing himself on the second line of hills. In brief, his orders were for the Tenth Division to fall back to La Meneghella and M. Croce Pille, the Ninth Division from M. Croce Pille to Frati, and the additional troops to Olfino. One battalion was to guard the left flank and the bridge at Salionze, the V. E. Lancer Regiment was to guard the bridge at Valeggio, and the Cavalry Division, acting from Pozzolengo, was to protect the right flank. The trains and equipage were to cross to the left bank of the Mincio.

THE OPERATIONS OF SEPTEMBER 1ST.

The Red forces were not molested during their withdrawal, and at daylight they were posted in their new position along La Meneghella, M. Croce Pille and Frati, extending to and resting upon the Mincio. By crossing his troops to the left side of the river, the commander could threaten the advance of the Blue forces and might even maneuver astride of the stream.

The Blue forces advanced in formation for action against Volta until they received information that the enemy had fallen back, when they again took up their order of march and moved forward as rapidly as possible, in order to occupy the strong positions which the enemy had vacated. The Blue commander desired to obtain all the benefit that he could from this unexpected advantage, and with the hope that he might be able to fall upon the enemy while they were in full retreat, especially at the crossing of the Mincio, he issued order to hasten the march of his troops for the purpose of regaining the contact which had been lost. It was not long until the sound of the cannon of the Red forces from their positions indicated that the contact had been regained. The Blue forces thus found themselves obliged to rest their advance on the line Montaldo-Busacchetti-S. Anna.

ORDERS FOR THE DAY OF SEPTEMBER 2D.

The commander of the Red Army Corps had perhaps resolved to cross his troops to the other side of the Mincio, but during the night he received from the commander of the supposed main army a notifica-

tion stating that the army had gained some advantages on the Po and the lower Mincio. The Red Army Corps was ordered to aid in completing the victory by driving back the Blue troops which were assembled on the hills of the Garda.

The commander of the Fifth Army Corps thereupon decided to act on the defensive for a time in the positions which he then occupied, in order to engage and exhaust the enemy and then to make a vigorous counter-attack with his own right wing, with the design of throwing his adversary back against the Mincio.

The commander of the Blue Army Corps likewise received a notification of the engagements which were assumed to have taken place in the Grand Veronese Valley, and he was ordered to advance resolutely against the Red troops, which were retiring upon the Mincio for the purpose of drawing away a part of the hostile army toward the north. The Blue commander therefore resolved to deliver an attack the next day, his plan being to make a change of front to the right pivoting on the Mixed Division. He issued the following orders:

The Mixed Division was to strike against Borghetto.

The Seventh Division was to strike against Mozambano.

The Bergamo Brigade was to strike against Peschiera.

The additional troops were to follow the Seventh Division and were to be subject to the orders of its commander. Bridges were to be constructed across the Mincio at Molino di Volta.

THE OPERATIONS OF SEPTEMBER 2D. THE CONFLICT AT MONTE CROCE PILLE.

During the night the Blue Cavalry Division changed its position from the left to the right flank of its own forces, moving out in the direction of Pozzolo, this with the intention of crossing the Mincio and acting against the enemy's line of retreat. This movement was the cause of a general alarm which lasted about an hour.

At daylight a Red force, consisting of four squadrons of cavalry, six battalions of infantry, and three batteries of artillery, crossed the Mincio at Borghetto and occupied the slopes of Monte Ogheri. The weather was cold and rainy.

The Blue Mixed Division against the line Frati to Fenilazzo, but it received both enfilade and reverse fire from the Red batteries on Monte Ogheri, and was therefore compelled to advance slowly in this line, and was obliged to dig hasty entrenchments to cover itself. At about 8.30 A. M., however, the Red troops were driven back to the village of Borghetto. On account of the advance of the additional artillery to the assistance of that pertaining to the division, and in view of the fact that the Blue Cavalry Division and Bicyclists were hastening toward that vicinity it could be foreseen that it would not

be long until they would be able to force the passage of the river at Borghetto and take possession of the bridge at Valeggio.

The Seventh Division, assisted by the Sixth Bersaglieri, attacked the strong position of Monte Croce Pille, but had not been able to carry it, when it was struck by a counter attack, which was resolutely made by the Tenth Division of Red troops. The Blue forces would have been forced to give way here had it not been for the intervention of the Blue Bergamo Brigade, which took advantage of an opportunity to act against the right flank of the Red troops, and thus checked their progress and obliged them to return to their positions.



ITALIAN ARTILLERY.

The Red Cavalry Division succeeded in gaining the rear of the Blue forces.

At about 9.00 A. M. the two opposing forces were in close contact throughout their entire front. It was then that the director of the maneuvers, acting under orders of the king, issued instructions that the Grand Maneuvers were terminated.

It may be said that this last day would have resulted in a substantial repetition of the engagement at Volta and Cavriana on August 31st. On both days the right wing of the Blue forces advanced slowly and without achieving any noteworthy advantages, while the left wing on each day suffered a counter attack and was saved through the intervention of the Bergamo

Brigade, which represented the exact difference in the strength of the two opposing forces.

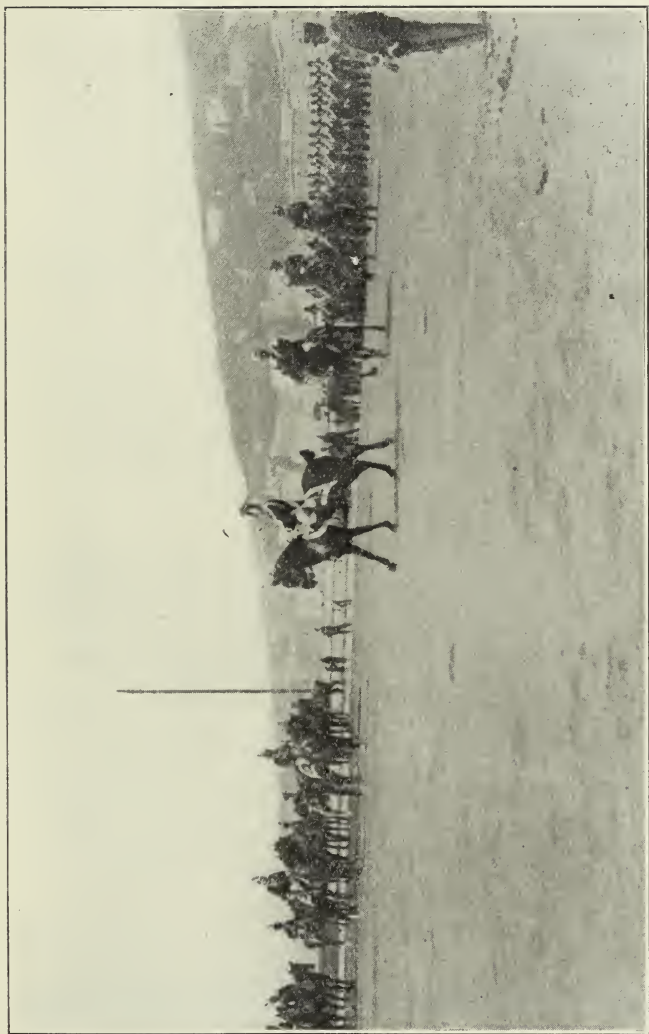
During the following day, September 3d, there was held in the theater at Guidizzolo a studied conference on the lessons to be drawn from the development and execution of the maneuvers. This conference was held in the presence of His Majesty, the King, and was conducted by the Chief of the General Staff of the Army, General Pollio. It was attended by the general officers, the commanders of corps, the heads of staff departments, and the field umpires.

REMARKS AND COMMENTS.

Concerning the subject of the maneuvers themselves we have no intention of repeating what has already been said or written. Certainly, because the directors of the maneuvers could intervene, it was necessary and practicable to confine the troops engaged to operations between the lines of the two imaginary large armies, in just the way in which it was actually carried out. It will be sufficient for us to indicate, as we have promised, the relation of the fortress of Venice, which would represent an element of the greatest importance, in any campaign which might be conducted in the region between the Mincio, the Adige and the Po. In connection with this study let us remind ourselves of the opinions of Cialdini in 1866, which were more or less in agreement with the views of the Prussian General Staff. The problem which was then presented there was, having a base on the Adriatic, to cross the lower Po and to move around the famous Quadrilateral.

With Venice in our possession, we also being guarded from the enemy on the side of the land, and with our fleet in control of the sea, what would be the difficulty in checking an adversary who might venture into the region of the lower Po, especially when it is considered that the operations on the land and those on the water are to be carried on in intimate relation with each other.

Thus the great importance of the lower Po may be understood. In all of the wars which have been fought in this region, it has always been utilized as a most important obstacle, and at the same time has served as a water route for the transportation of troops, as was the case, for instance, in 1813. And on other occasions it has been navigated and defended by fleets and



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batteries, and some of its mouths have been obstructed, as was done in 1869.

In regard to the execution of the operations of the maneuvers, we shall limit ourselves to a few remarks touching some of the more important points.

The Red forces adopted a most commendable course in moving against Peschiera with all of their strength in artillery and infantry in order to get it quickly in their own possession. But perhaps it would have been better not to have included the Cavalry Division with the troops which were assigned to this enterprise, because at the beginning of the operations it might have been able to undertake not only the duty of a covering force, but also that of interfering with the concentration of the Blue forces.

The quick fall of Peschiera has aroused much discussion, some of which has found a place in the historical records of these maneuvers. The actual state of the case was that Peschiera could only have become the theater of field operations, and such was in fact the true nature of the operations which occurred in the vicinity of that place from the afternoon of August 26th to the evening of August 27th.

It is open to consideration whether or not it would have been better for the Red forces to have remained on the eastern bank of the Mincio in easy touch with their own main army, which was assumed to be stretched out as far as Marmirolo. In this way, and by sending out troops to occupy the hills of the right bank of the river, there would have been avoided the danger of being defeated without any opportunity to receive assistance. The commander of the Blue forces did take a similar possibility into consideration on his own part, and as we have seen, he preferred to operate in the vicinity of his assumed main army rather than to separate himself from it.

The wisdom of the destruction of the bridges across the Mincio by the Red forces may be regarded as open to discussion if viewed according to general principles. There would seem to be several good reasons why the one at Goito should have been preserved, among the most important of them being the opportunities it would have afforded for acting against the flank of the Blue troops, which would thus have been exposed to the counter attacks of the right wing of the Red army which was assumed to be at Marmirolo.

Finally, the decision which was made by the commander of

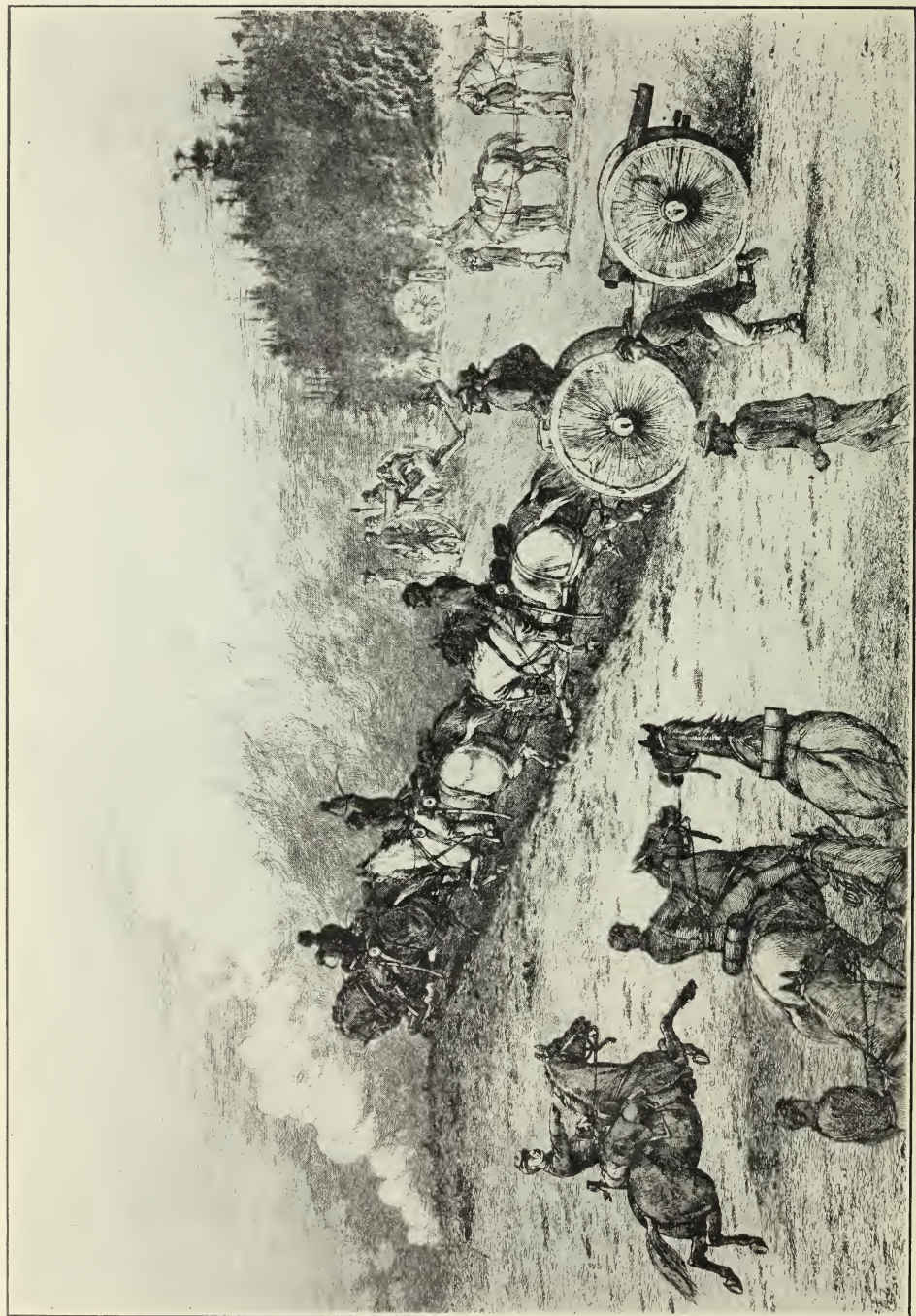
the Red forces on September 1st, to abandon the positions of Cavriana and Volta from which he had repulsed the attacks of his enemy on the preceding day, is not thought to be fully justified by such notification as he had received about possible danger to the right flank.

There must certainly have been other reasons, not known to us, which caused this movement in retreat to be determined upon. It is unquestionably true that the result of this was that the situation was changed in favor of the Blue forces, who, by persistence in their attacks could hope to finally force back the left wing of their opponents and thus place them in a critical situation. We have already seen how the orders of their army commander induced the troops of the Red side to maintain themselves on the 2d of September in the new positions which they had occupied and where they again accepted a battle on the right bank of the Mincio.

In conclusion it can be said for the Grand Army Maneuvers that they will beyond doubt serve to make known the defects of the military organization, to emphasize faults, and to illustrate the deficiencies and the needs of the commanders, the troops, and the supply services.

However, it is right that there should be taken into account all of the circumstances of the maneuvers which would have any tendency to either aggravate or minimize the importance of these defects in comparison with what they would be in actual warfare. On the whole, however, whether they be considered by themselves or from a point of a broader view as to their importance, the Grand Maneuvers of this year are deserving of the judgment that they perfectly accomplished the objects for which they were designed.





From Wartime sketch by Edwin Forbes.

"ACTION FRONT!"

A REVIEW OF THE SERVICES OF THE REGULAR ARMY DURING THE CIVIL WAR.*

BY MAJOR JOHN C. WHITE, UNITED STATES ARMY.

III. THE ARTILLERY.



HERE we will pass over to the Shenandoah Valley on our way back to the Eastern scenes of activity, and where we will dwell for a short space that we may the better recognize the connection with and influence upon the Peninsular campaign which had begun with the first favorable spring weather.

Soon after the Bull Run battle, where the conduct of his brigade, as voiced by Gen. Bee, had won him his sobriquet, "Stonewall," Jackson has been sent as a major-general in command of one of three districts organized under Gen. Johnston, in the so-called Department of North Virginia.

McClellan had been planning and organizing a masterly movement to capture and occupy the valley of the Piedmont region. In his efforts to this end as made by his representative commanders there were collisions between the hostile forces in which "E," 4th Art., under its captain, Joseph Claypoole Clark (* '48), with Lt. William L. Baker ('61), took part at Middletown and Cedar Creek, March 18th, while again at Kernstown, on the 23d, when Gen. Shields was victorious over his skilful antagonist.

The tables were turned, later on, when Jackson overwhelmed Gen. Milroy and drove Gen. Banks' army over the Potomac. "F," 4th, under Franklin Butler Crosby, Edward Duchman Muhlenberg and Harry Cooke Cushing—all civil appointments of '61—was the only Regular battery in the engagements at Strasburg and Winchester on the 24th and 25th May. "E," again, shared in the fighting at Port Royal on the 30th, under the two officers mentioned above.

At Port Republic, June 9th, this same battery was effica-

*Continued from May JOURNAL.

cious in converting Jackson's whirlwind and successful onslaught into a permanent check to further operations in that direction. But in a few days, thereafter, McClellan was to learn that this wily and resourceful foe was stealing upon his right flank on the Chickahominy, while the Federal Government feared to permit McDowell to unite with McClellan, as had been pledged, lest the Capitol should be exposed to such a ubiquitous raider.

Johnston having withdrawn from Manassas, it was no longer the objective it had been, and McClellan had to abandon his original plan for an advance against Richmond, altering it to one which should make Fort Monroe and vicinity the base for operations from the southeast, with the co-operation of the navy.

From the best information obtainable there appeared to be about 15,000 troops under Magruder at historic Yorktown, strongly intrenched and constantly reinforced from Norfolk.

The advance which began April 4th was designed to cut off the Confederates, and to prevent further arrivals of reinforcements by occupying the Half-way House, where the Peninsula is reduced to a narrow neck of land.

The first day's movements saw "D," 5th, now under Lt. Henry Walter Kingsbury (its captain, Griffin, being in command of the divisional artillery), called into action at Howard's Bridge and Cockletown, and, again, on the two following days, at Warwick Creek.

But this sort of skirmishing, which caused the Army of the Potomac to be halted before the lines of the Warwick, had led to the austere criticisms upon the commander by the Administration.

A sharp skirmish at Lee's Mills or Burnt Chimneys, on the 16th, in which "D" battery was joined by its sister one, "F," 5th, under Capt. Ayres with Lt. Martin, resulted in the capture of an important work, but as no general engagement was desired, the movement was not followed up. Severe storms were creating a condition in the roads only to be appreciated in Virginia.

The investment of Yorktown, however, was duly established, and the troops found themselves daily and busily employed in the construction of batteries for mortars and siege-guns, gabions and fascines. The siege operations thus went on until all arrangements having been perfected for opening joint

fire by the army and navy on the 5th May, it was discovered that the enemy had evacuated his positions. So soon as this was known orders were issued for an advance of all arms, which was, however, delayed by storms, and the removal of torpedoes which had been planted in the roads. We find that Horse Battery, "B" and "L," 2d Art. (consolidated), under Capt. Robertson, with Lts. Jno. M. Wilson, Carle A. Woodruff and A. O. Vincent, moved out from Camp "Winfield Scott" on the Sunday morning, May 4th, taking the road to Williamsburg, arriving in front of that place in the afternoon, where it took up several positions under orders from Gen. W. F. Smith, but though exposed to the enemy's fire it was given no opportunity to reply. On the evening of the 6th it was detached from the Horse Artillery Brigade and was directed to report to Gen. Stoneman for duty with the advanced brigade of the army, following the retreating enemy towards Richmond. On the 9th, at Slatersville (New Kent C. H.), all three sections under their respective chiefs were employed in a skirmish that developed considerable defective ammunition—out of 34 shells fired (6 3-inch rifles), fully one-third failing to explode. On the 12th, "A," 2d, under Capt. Tidball, with his subalterns, Pennington, Dennison and Clarke, with Lt. Col. Hays, joined Stoneman's command at Cumberland, and with the other batteries continuing therewith until the 31st, when they rejoined the Artillery Reserve.

"M" (idem) (6.3-inch rifles), Capt. Benson, his lieutenants being Barlow, Hains and Chapin, are also credited with being present at Williamsburg and New Kent C. H., and was detached with Porter's command on the 27th, taking an active and important part in the battle of Hanover C. H., or Mechanicsville. "H," 1st, with 4 10-pdr. Parrotts and 2 12-pdr. howitzers, under Capt. Webber, with Lts. Chandler Price Eakin ('61), Horace P. Pike ('62) and Philip D. Mason (idem), as attached to Heintzelman's (3d) Corps; as also a consolidated battery of "C" and "G," 3d, under Capt. H. G. Gibson, with 6 3-inch ordnance rifles and Lts. Edmund Pendleton, Henry McNeill and H. S. Gansevoort (all three of '61) share in the record of Williamsburg. In this battle large forces of Regular artillery as well as of cavalry were employed. Benson and Gibson, accompanying Brig.-Gen. W. H. Emory's small force, found themselves in front of Fort Magruder, a strong earth-

work with flanking redoubts, when, the enemy being strongly reinforced, the Federal troops were compelled to retire.

"H," 1st, badly placed in a most exposed position from the fire of both fort and redoubt, as well as from the musketry fusillade from rifle-pits not 150 yards off, with the majority of the 52 men raw recruits, lost five of its pieces and two of its officers severely wounded (Lts. Eakin and Pike), besides heavily in men and horses, after the enemy had made a successful flanking movement, and had swept cannoneers and supports off the field. There not being enough horses to drag off the pieces, they had to be abandoned, but were recovered the following day upon the occupation of the place. Gen. Hooker, to whose division the battery had been assigned, most magnanimously took all the blame upon himself for the disaster and bestowed the highest praise upon the officers and certain of the old men.

Gen. Howard mentions having found his "friend Kirby with a field-battery" ("I," 1st), with epaulements for 6 guns, having just recovered from a serious attack of typhoid fever, in front of Sumner's center."

"D," 2d, under Upton (Platt being chief of divisional artillery), was with Franklin's Division in its engagement with Whiting's troops, upon disembarkation at West Point, May 7th, which had been skilfully executed by Capt. Richard Arnold, where it held its position manfully for Franklin, and at Williamsburg.

The Union troops having occupied the abandoned works, though they had failed to cut off and capture the Confederate force, as had been attempted, had pushed on in pursuit of the retreating foe and had become divided.

To reunite them before either portion could be struck was now the problem. Successfully accomplished, two lines of operation were open to a further advance. Nervousness at Washington seems to have compelled McClellan, against his military instincts, to follow the one across the Chickahominy, and to make his base of supplies the White House, the home of W. H. F. Lee. "The weather was atrocious, and it was with no little difficulty that the advance could be made." (McClellan.)

"D," 5th Art., under Lt. Henry Walter Kingsbury (* '61), with 6 Parrotts and with Lts. Chas. E. Hazlett (1st class * '61), Loyd Magruder Harrison and Horatio Blake Reed, civilian appointments of the same year, was frequently in evidence during this forward movement, under Stoneman, which had succeeded

in cutting the Va. Cent. R. R., thus retarding arrival of fresh troops for the enemy. In addition to their legitimate duties, the men were obliged to work in water up to their waists, and under fire, in the repair of the bridges that had been washed away in freshets created by continual heavy storms. The only bridges left intact had been found at Mechanicsville, where "A," "B" and "L" of the 2d had been actively employed.

No battery of the 1st Art. was in action after Williamsburg until the army had advanced to within a short distance of Richmond, and the same seems to have been the case with the 5th Art., with the exception of the engagement at Hanover C. H., as above by "D" battery.

Johnston, having determined to attack McClellan before he could effect a junction with McDowell, instructed D. H. Hill to make the assault on the morning of May 31st. A violent attack on Casey's (3d) Division, followed by an equally formidable one on Couch's (1st) Division of Keyes' (4th) Corps, began the battle known as "Fair Oaks," which was the name of a station on the Richmond & York R. R., where the nine mile road crosses the tracks; the Southern designation of "Seven Pines" arising from such trees at the junction of an old stage road with the other. "A" and "C," 4th, under Capt. Geo. Washington Hazzard (* '47), 6 12-pdrs., who also was in command of the 1st divisional artillery of Sumner's (2d) Corps, Lt. Rufus King and Arthur Morris, just appointed, were in charge of "A," and Evan Thomas and Edward Field of "C." They had all that they could do, and well did they do it, as attested by their general. "I," 1st, under Kirby, did its usual splendid work, with Sedgwick's (2d) division of same corps, being complimented by McClellan in person. That fine Regular officer, Guilford D. Bailey, now colonel 1st N. Y. H. A., lost his life at the head of his volunteer command in this engagement.

Gen. Howard's and Col. Francis A. Walker's graphic descriptions of the performances of these batteries are well worth perusing.

The other Regular batteries were with their respectively assigned commands, but while often in position were not called into action.

The successes gained by the Confederates on the first day were lost on the next, June 1st, and in some respects there was a strong resemblance to the two days' battle at Shiloh—the first great clash of arms in the West as this was the initial contest

of large proportions between the Confederate Army of Northern Virginia and the Federal Army of the Potomac. Towards the close the former lost its chief, Gen. Johnston, who was severely wounded, and Gen. Robt. E. Lee first appears as its commander. The battle was followed by storms of great severity, which, naturally, increased the difficulties of position and retarded construction.

From now until well into June the two armies confronted each other east of Richmond, and of about equal strength, but it was not until the 25th of the month that McClellan felt free to attack. Upon this date "K," 4th, De Russy's battery, commanded by Lt. Seeley, with Lt. Eugene Adolphus Bancroft and a volunteer lieutenant was sent into action at Oak Grove, or as it was also known, the Orchard. A few days prior at New Bridge (18th, 19th, and 20th), "K," 5th, Capt. Jno. Radcliff Smead (* '54), with Lts. Jas. Watson Piper, Henry Feltner Brewerton and Wm. Edward Van Reed, all appointments of '61, were employed in frequent skirmishes; as were "I" of the same regiment, under Capt. S. H. Weed (* '54), with Lts. Malbone Francis Watson (1st class * '61), Thompson Price McElrath, and Charles Curtis McConnell, civil appointments of that year; and "I" and "M," 3d, under Capt. Edwards, who had as lieutenants Jeremiah D. Hayden ('61), Jas. Rigney Kelly—a fine old engineer and artillery soldier—commissioned the same year, and Henry Francis Brownson, and the civilian appointment towards the close of that year. Lts. Piper, Hayden and Kelly were wounded, the first two severely.

Information being secured of Jackson's approach from Western Virginia, and fearful of an attack upon his right and rear in combination with Lee in front, while McDowell's promised reinforcement had not materialized, McClellan decided to abandon the line of the Pamankey and take up that of the Janus. Consequently, during the night of the 26th, Porter's siege-guns and wagon-trains were brought over to the south side of the Chickahominy, where they were attacked, while in position, on Beaver Dam Creek, near Mechanicsville. With the aid of "L" & "M," 3d, and "C," "D," "L" and "K," 5th, all officered as heretofore given, the enemy, under A. P. Hill, was repulsed with heavy loss—the battle being with Porter, as was the victory. Thus began the historic "seven days' fight," lasting from June 26th to July 2d, each beginning after noon on the several occasions. Tidball's and Robertson's batteries had assisted in cov-

ering the rear or withdrawal of troops, which was made thereafter in the fear that Jackson's attack would be made still further to the rear; and which movement has been criticized by Longstreet, leading as it did to the battle of Gaines' Mill in the morning, in that not only was a very strong position abandoned, but there followed a transference of the morale of their success then to the disheartened Confederate forces.

In changing positions, when it was discovered that the Union forces were abandoning their intrenchments, the Confederate infantry pressed forward in small detachments—the main body and the artillery being delayed to rebuild bridges. But Tidball's and Robertson's well-handled batteries kept the foe at a respectful distance while the troops and the wounded reached the selected new positions.

The siege-guns of Tyler were safely removed by hand and put "in battery," where they were used with damaging effect in the afternoon, as the enemy advanced to attack the left.

While there were no less than 16 batteries with Porter, they "were without head or proper control, and were put into the fight without system or much skill, except on the part of individual battery commanders," and in strong contrast to the methods adopted by the Confederates. "As the battle progressed the batteries in reserve were thrown forward and took the best position available. The extreme simplicity of the battle favored this, and enabled battery commanders to supplement by their own judgment what was lacking in the proper organization and command of the artillery." (Bush.)

"During the previous night (26th) five of the batteries of the artillery reserve were collected in rear of the epaulement thrown up by the troops of the 6th Corps, in a wheat field in front of the Federal lines, on Golding's Farm, on the south side of the Chickahominy, as ready to take position in it and to commence a heavy fire on the enemy's line opposite. But on that evening the fight at Beaver Dam creek had occurred, and during the afternoon several of the heavy guns were used with effect on columns of the enemy on the north side of the Chickahominy—moving against Porter—and thus causing them to fall back and seek some other route of attack." (Franklin.) Lt. Ames, "A," 5th, with Fuller, Gillis and Crabb; Ayres, "F," 3d, under Martin, with David Hunter Kinzie ('61, formerly a cadet), and Chas. Ralph Hickox ('61), "E," 2d, Carlisle, with Benjamin; Wm. Preston Graves, recently appointed, and a vol-

unteer lieutenant; and Elder, of the 1st, with "K," and its light 12s, were of that force. After Carlisle's battery had been withdrawn, Lt. Benjamin remained and offered his services to Lt. Ames, by whom, Carlisle and his chief, Getty, attention was invited to his gallantry in continuing to serve when so injured that he could not stand without crutches, and had to ride on a caisson, when moved similarly, as we have seen, with Lt. Ames' course on a previous occasion.

As space does not permit to go further into the details of this severe contest, we can only touch upon certain salient features as affecting the artillery. In a final effort to crush the corps, D. H. Hill's troops succeeded in capturing a part of Kingsbury's battery "D," 5th, but it was soon rescued by its supports. Edwards' "L" and "M," 3d, with Warren's Brigade, had "turned the tables" on A. P. Hill, who states that "from being the attacking, I now became the attacked." Despite a forced march, Jackson had been unable to reach the point expected on that morning—undoubtedly most fortunate for the Union cause. But though the advantage had been with that side up to the evening, under the redoubled attempts of the enemy, with constantly increasing numbers, as Jackson's troops arrived, "the elastic limit was reached, and borne back by the resistless pressure the line at last broke and bent backward on either hand." But as Jackson himself bears witness, "by their almost matchless display of daring and valor the well-disciplined Federals continued in retreat to fight with stubborn resistance." At the last charge of the Confederates, just before sunset, 80 guns were concentrated to cover the withdrawal of the infantry, opening successively, checking in some places and in others driving back the hostile forces. "D," 5th, remained till after dark, when it was called in. Weed's "I," 5th, with Tidball's "A," 2d, posted on the extreme right, were principal factors, as acknowledged by Gen. Sykes in his official report, in repelling three powerful assaults and in preventing that flank from being enveloped and crushed. With Weed were Watson, McElrath and MacConnell, with Tidball, Pennington, Dennison and Clarke. During the withdrawal of these batteries amenities were indulged in between the two commanders worthy of Fontenoy.

Smead's "K," 5th, having replenished its ammunition chests, reached the battle-field during the afternoon, went into battery and fired some forty rounds of shot and shrapnel; Van Reed with

it, Brewerton having been sent to report to Capt. Gibson, 3d Art.

De Hart's "C," 5th, kept its ground on the crest of a hill and delivered a steady fire against the advancing enemy; its officers and men displaying the greatest gallantry, which, however, was not successful in repelling the rush of a now successful foe, "under whose attack rider and horse went down and guns lay immovable upon the field." (Seymour.) Captain De Hart was mortally wounded, the command passing to a young civilian appointment of '61—Eben Greenough Scott. While they brought off their guns, the battery was evidently seriously crippled, as nothing more is to be learned about it during the continuance of the campaign.

Despite the loss of 22 guns in all, great credit has been bestowed upon the artillery (particularly by D. H. Hill) for this, one of the hardest fights of the war, according to Griffin, where the loss had been particularly heavy among the officers. The army, however, was safely withdrawn to the south bank of the river and the bridges destroyed shortly after sunrise on the 28th.

After an affair at Turkey Bend (28-29th), in which Edward's batteries were again called into action, McClellan announced to his generals his purpose to begin a movement to the James River at once.

The engagement known as the Peach Orchard, or Allen's Farm, took place between Sumner's retiring corps from Fair Oaks section, acting as rear-guard on the 29th, and Magruder's attacking force. It was a spirited fight of a couple of hours' duration, in which Kirby's "I," 1st, and "A" and "C," 4th, under Hazzard, with Rufus King, Arthur Morris, Evan Thomas and Edward Field, rendered their accustomed faithful services.

Major Alex. S. Webb, of Gen. Barry's Staff, was giving able assistance in that capacity, as he had previously done in his reconnaissance to Hanover C. H. the month before.

On the same date, at Savage Station, east of the Fair Oaks, Hazzard, with his own "A" and "C," 4th, and the two volunteer batteries under his command, had a lively time in silencing the enemy's artillery, which had been playing with effect upon our troops. "I," 1st, again, and "G," 2d, Capt. Jas. Thompson, were likewise engaged; Hazzard having King and Field as sub-alterns, and Thompson, J. H. Butler and Jas. Samuel Dudley ('61), in same capacities. The former came very near to losing

his battery that night, through not knowing that the rest of the troops had withdrawn.

Having become satisfied that Richmond could only be taken by regular approaches, or assaults requiring greatly superior numbers, all efforts were being directed towards the transference of the army to the James River. While this was in course of transaction, the disastrous battle of Glendale, or White Oak Swamp, took place on the 30th, in which Randol's combined batteries, "E" and "G," 1st, suffered the loss of 6 guns. Lt. Hill was mortally wounded and captured, and 18 men and 38 horses placed hors de combat. This catastrophe had followed the action of the supports in dashing through the battery under a fierce onslaught of the enemy, thus preventing the continuance of its previous "storm of canister." A subsequent court of inquiry, as well as a letter from Gen. Meade (who was severely wounded in this action), completely exonerated Lt. Randol, who, with Lt. Olcott, served as volunteer aides. Capt. Thompson had a narrow escape from the same fate, and, as it was, he had to abandon one, spiked, for which he was censured by Gen. Kearney, who mollified it by the indorsement "brave in action, negligent afterward." This was the severest action after Fair Oaks in the opinion of that old war-horse, Gen. Sumner, and the dashing Kearney. The Confederates gained some ground, but no substantial advantage, and the Union troops withdrew, during the night, to Malvern Hill. "As an obstruction to the Federal retreat the fight amounted to nothing." (D. M. Hill.)

That same day a section of McKnight's "M," 5th Art., was skirmishing at Jones' or Ford's Bridge, while "K," 4th, under Seeley, was in action at Roper's Church, having Bancroft and Henderson as assistants.

Jackson, having left Savage Station in the morning, arrived in the vicinity of White Oak Bridge about noon without exciting suspicion of his presence on the part of the Federals, the dense woods screening his movements. Here he massed some 30 guns, which opened "by battery" upon the Union troops with severe effect. When their own guns got into action they silenced a number of their opponents.

An artillery action, solely, had begun that same day between Huger and Slocum, and had been successful in preventing the Confederate forces at White Oak Swamp from reinforcing Longstreet while four Union brigades had been brought up in support. During this combat Capt. Hazzard, while exercising

his command of the divisional artillery of Richardson, ended "a brilliant career with a glorious death." Of him Gen. Howard writes: "I saw Hazzard in battle, and I never knew an officer who could bring a battery into place and serve it with more rapidity. His great vigor kept all his command well in hand and made his battery of twice the value of any other that I ever knew." Capt. Ayres, the divisional commander in W. F. Smith's Division of Franklin's (6th) Corps, used his guns with excellent effect through their "cool and steady firing."

A staff officer of Gen. Smith had explored a road over which the concentration of the army at Malvern Hill was "a completed maneuver by noon of July 1st." The trains and heavy artillery arrived in safety at James River (excepting about 50 out of 4000 that were destroyed in the bombardment at White Oak Bridge); and the troops arrived in good trim at the river, "so that they were all in the position desired by the commanding general to await the attack at Malvern Hill, long before that attack was made."

The hill was on the north bank of Turkey Creek, with Crew's Hill about a mile further north, where the reserve artillery and infantry were held for immediate service, concealed from view of the enemy, and sheltered to some extent from his fire. For once, they held a vantage-ground from which "they tore the Confederate batteries into fragments after they opened, piling them upon each other and guns upon horses," by the testimony of Longstreet. "We were repulsed at all points with fearful slaughter, losing 6000 men and accomplishing nothing."

The initial action, about 4 P. M., on Monday, 30th, was known as Turkey Bridge and Malvern Hill, and in which "T" and "K," 5th, under Capts. Weed and Smead, respectively, were busily engaged; the former assisted by Lts. Watson, McElrath and MacConnell; the latter by Lt. Van Reed. When it is considered that these batteries had only been organized about eight months prior, their steadiness and effectiveness are most noteworthy! "D" of the same regiment, under Lt. Kingsbury, with Hazlett, Harrison, Reed and Carroll, "so shattered a regiment charging upon it, in one of the desperate assaults that were subsequently made, that the infantry bolted, leaving their colors, which were afterwards awarded to the battery." "A," under Ames, with Fuller, Gilliss and Crabb, was at the left of "D," while Livingston's "F" and "K," 3d Art., with Lts. Jno. Graham Turnbull, Geo. Forrester Barstow (both appts. '61),

and Wm. Clarendon Cuyler ('62) upon the latter's left again. There also was Lt. Morgan, with Dickenson, and "G," 4th; Edwards' "L" and "M," 3d, with Lt. Brownson; "K," 4th, under Seeley, with Henderson and Bancroft. Tidball's "A" and Robertson's "B" and "L," 2d Art., as "I," 1st, under Lt. Kirby, were under fire almost continually but were not called upon to perform any very arduous service. About noon on July 1st the infantry assaults began and were continued with desperation, despite the terrible slaughter inflicted upon them, in which the gunboats played a notable part under valuable intelligence from the Signal Service men. During an ominous silence which prevailed after the repulse of the earlier attacks, Gen. Porter sent Weed, Carlisle and Smead to a position where, should the enemy break the lines and emerge in pursuit, they, loaded with double canister, would be prepared for them. Happily they were not called upon. "Just as the sun was setting the enemy made their last and most determined assault, which fell entirely upon Porter. * * * But at the critical moment pushed forward his reserves, including the splendid volunteer batteries, and in an almost continuous salvo of about 60 guns, opened on the enemy, crushing him back into the woods from whence he did not again return." Col. F. A. Walker states that the batteries "far surpassed the ordinary achievements of artillery; they fairly smashed the artillery which the Confederates sought to bring into action. Battery after battery, on that side, was driven from the field without being able to get a single shot out of one of their guns, while upon the daring infantry lines which pressed forward in the hope of carrying the crest they rained a fire which for destructiveness has seldom, if ever, been exceeded in the history of war." And so, in quotation and narrative, pages could be compiled, if space permitted, of this remarkable battle, which so thoroughly exemplified the vital importance of massing artillery as already commented upon.

As all the officers engaged in this campaign, from highest to lowest in rank, received the most flattering encomiums from their commanders, it would be only multiplying words to quote them severally. Quite a number of brave and able non-commissioned officers were recommended for promotion; but in a few cases the reward proved to be injudicious and misdirected, as before pointed out.

The firing was kept up till 9 P. M., and the following day the army retired to its base at Harrison's Landing. This

place had received its name for the President Wm. Henry Harrison, as his birthplace, which had taken place in the fine old Berkeley Mansion (to which the landing served), or "West-over," as it was also known.

Gen. Stuart, who was raiding about the center of the Peninsula, hastened thither, and posting a battery near Malvern Church in the early days of July, had opened fire upon the army's position, but a few shells from the gunboats and Tidball's battery "A," 2d, soon put a stop to that. That and Robertson's "B" and "L" (*idem*), had a brisk engagement on the night of the last day of that month, when a fusillade had been opened upon the shipping and supply depots from Crogan's Point, but to which little damage had been done. August 4-6: Robertson and Burson were employed with Hooker on his march to Malvern Hill once more when orders were received from Washington to withdraw from the Peninsula.*

THE ARTILLERY IN THE WEST

Resuming the review of events, it is found that the advance upon and the siege of Corinth, which continued from April 29th to June 5th, had included the services of "F," 2d Art., which, in the absence of its own officers, was under the command of a volunteer captain of Missouri artillery, Thos. Davies Maurice, who was commissioned in the 2d Art. after the war for his gallant services. The battery was also engaged in the cavalry fight at Farmington, Miss., May 8-9, 1862.

"H," 4th (Parsons, Canby, a vol.); "I," *idem* (Frank Guest Smith, with Geo. Bridges Rodney and Jno. Mortimer Stephenson, all civilian appointees of '61); "M," *idem* (Mendenhall and Huntington), and "H," 5th (Terrill and Guenther), were all employed during the continuance of the siege, which was finally brought to its successful issue at the date given. "F," 2d, was again called into action at Iuka, Sept. 19th, and once more at Corinth, Oct. 3-4th.

"M," 4th, was engaged, Aug. 27th, at Round Mountain, while "H" of the same is credited with rendering able assistance to his column

*In attempting to follow up the services of the various batteries, crediting them with the actions in which they were engaged, it is found that the scattered manner in which they were thus utilized would call for much more space in the recital than could be allotted by the JOURNAL, and therefore it must be reduced to the mere mention of organizations and officers, whose discharge of their duties would require many pages to recount in detail of campaign and engagement.

Should, however, the compiler have had any reason to feel that his efforts have met with the appreciation of the survivors of that period as to his laborious collation of data (carefully and conscientiously verified by official archives), and have awakened any interest among the present generation, there will be encouragement to revise the chronicle in book-form, with maps, portraits and illustrations—the whole interwoven with sufficient narrative, comment and anecdote as will establish coherence and comprehension of the chain of events. To this end, candid criticism is courted, and especially in the correction of errors and omissions that may have crept into these pages; since even in official reports mistakes have been detected.—J. C. W.

by Col. Hazen upon a reconnaissance, and when commanded by Throckmorton.

Oct. 4th, at Springfield, Ky., Lt. Smith and his officers drew forth the commendations of the commander of the troops with whom their service was rendered, and was again in requisition at the fierce battle of Perryville, Oct. 8th, where the brave Terrill, recently made a volunteer brigadier, lost his life.

"H," 4th, met with serious disaster also, losing 7 of its 8 guns which had been manned by details from various volunteer regiments; but Parsons himself, after the battle, was the recipient of a handsome recognition of his personal gallantry at the hands of both Generals McCook and Rousseau. Under the first-named general, both in a skirmish at Frankfort on Oct. 6th and on the 8th, at Crab Orchard, Lt. Guenther, now in command of "H," 5th, came to the assistance of the infantry there engaged, and, likewise, at Dog Walk (or Dry Ridge), where the commander of the expedition is on record that "Guenther's guns were handled with the usual vigor and skill of that accomplished officer," their fire being "very effective."

With numerous skirmishes in the neighborhood and, finally, the bloody battle itself of Murfreesboro, Tenn. (Stone River), beginning Dec. 29th, the year closed, with continuance, up to Jan. 5, in consequent engagements. Mendenhall was chief of artillery for the "Center," receiving recommendation for promotion in recognition of his "general efficiency and personal bravery and good conduct in battle." Guenther, with his lieutenants, Ludlow and Joshua Abbe Fessenden ('62), was co-operating with the "Regular Brigade," being subjected to the murderous fire which so decimated that command while in the "impossible position" to which it had been ordered until directed to change it by Gen. Thomas in person. There, with the assistance of Loomis' splendid volunteer battery, the enemy was repulsed in their "four deliberate and fiercely sustained assaults," and constituted a nucleus upon which other batteries and troops formed, until the line proved impregnable." Rousseau. "H"- "M" (Parsons, with Harry Cushing and Huntington), serving with Palmer's (2d) division, also received great praise for their performance of duties. Early (Jan. 2d) in the new year "H," 5th, was moved to the front to meet a fresh attack, assisting in silencing batteries, and in effecting the repulse of an assault on Crittenden's left wing; and again, the next day, assisted in the capture of a line of breastworks. Rousseau called for promotion for both Guenther and the volunteer coadjutor, as "without them we could not have held our position in the center."

In the far south "A" and "F," 1st, having left Pensacola, were equipped as light batteries while at New Orleans with 4 light 12's and 2 3-inch rifles, and were filled up to 100 men each by the transfer of volunteers referred to in introductory paper. "A" was commanded by Capt. Edmund Cooper Bainbridge (*'56) of the 5th Art., and who had as lieutenants Edward Alexander Duer ('61) and Ballard Smith Humphrey (army '62), both officers of the 1st.

"F" was still under Capt. Duryea, with Lts. Hardman P. Norris, Wm. Lawrence Haskin and Edwin L. Garvin, the first two civilian appointments of '61; the last one, of '62. "A" had scarcely received its armament when, in January, a detachment from it was sent to accompany Gen. Weitzel's command up the Bayou Teche, La., where it destroyed the gunboat *Cotton* on the 13th. At Fort Bisland, near Irish Bend, and the scene of the above affair, "F," which had joined "A," and which was under the command of Capt. Closson as chief of artil-

lery of the division (Grover's), co-operated in the affairs of April 12th and 13th. At Irish Bend itself Grover's command on the 13th engaged in a hotly contested control of the bridge across the Teche, in which two sections of "L," 1st, and "C," 2d, under Capt. Jno. I. Rodgers were employed; the latter, however, being alone in action, the former being held in reserve. When the fort was found to have been evacuated, and the army started in pursuit, "F," 1st, while marching in the van, was involved in a skirmish, noisy but harmless to the battery. The enemy, which had resumed their flight, made a short stand at Vermilion Bayou, on the 17th, but where they were soon shelled out with but a trifling loss. "L," 1st, was Classon's battery, and was at this time officered by Lts. Franck Eveleigh Taylor and Edward L. Appleton, both appointments of '61 from civil life.

Leaving these troops taking a hard-earned rest in camp at Alexandria, La., before entering upon the Port Hudson campaign, we will return to the experiences of the Army of the Potomac. Being compelled to eliminate, for reasons given, all that had been prepared as to the circumstances which led to the assignment of Gen. John Pope to the command, the review must be confined to the deeds of the Regular batteries included among the field ones of about 150 guns.

At Cedar (or Slaughter) Mountain, about 8 miles beyond Culpeper, there ensued a fierce engagement on Aug. 9th, in which "F," 4th Art., commanded by Lt. Edward Duchman Muhlenberg, with Harry Cooke Cushing, was engaged. Both officers were civilian appointments of the year before. The artillery brigade to which it was attached was under Capt. Clermont Livingston Best (* '47), 4th Art. The battle served to check Pope's advance, and was followed by affairs of *petit guerre*, looking to the defense of the Rappahannock, in which "E," 4th, under its captain, Joseph Claypoole Clark (* '48), with Lt. Wm. L. Baker ('61), was engaged from the 18th to the 26th; while around the "station" "B," of the same regiment, was actively employed from the 21st to the 23d., under Lts. Joseph Boyd Campbell (2d class, * '61) and Jas. ("Jock") Stewart, an *élève* of that year after ten years' admirable service. The gallant Benjamin was again conspicuous at Sulphur Springs, near Warrenton, on the 24th, while on the 26th, in the same neighborhood, "B" was again called into action. Hooker and Ewell coming to close quarters at Broad Run (or Buckland Bridge) on the 27th, "E" was called upon to silence the hostile batteries. The following day, at Gainesville, it was once more in requisition, where Ransom was chief of an artillery brigade.

"D," 5th, now under Chas. Edward Hazlett (1st cl. * '61), who had succeeded Kingsbury upon that distinguished officer's appointment as colonel of volunteers, had taken a prominent part in the conflict, where Hazlett greatly distinguished himself, while De Hart's old battery, "C," was in joint operation with it, both then and upon the day before, under Ransom's command.

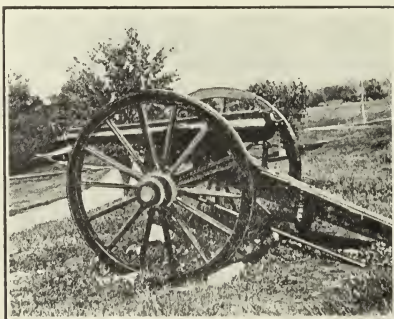
In the battle of Manassas (given the name of Second Bull Run in the North), which raged throughout the 29th and 30th August, these two batteries, and Smead's "K," with Lt. Van Reed, and Weed's "I," with Lts. McElrath and McConnell, represented their regiment; Weed being chief of artillery with Sykes' Division, the battery was commanded by Lt. Malbone Francis Watson (1st cl. * '61); while Van Reed succeeded Smead after that able battery commander had been killed, on the second day, while removing his guns. That "Capt. Weed had strengthened the reputation he had already acquired" was the testimonial of Gen. Sykes.

These, with Randol's "E"- "G," 1st, and Graham's "K" (idem); "E," 2d, under Benjamin (who was still on crutches), with "B" and "E," 4th, officered as before, constituted the Regular Artillery force in those notable engagements. Randol had Egbert Worth Olcott ('61) and Wm. Chambers Bartlett (* '62), just returned from sick leave, to assist him in his assignment to Sykes—the battery having been re-equipped with 4 new light 12's. Captain Graham's subalterns had been Elder, Wm. Murray Maynadier ('61), and Theophil Von Michalowski (Army '61), the battery service eliciting the praise of both Kearney and of Reno, with each of whom it had been rendered. Benjamin's efficient assistants had been Jas. Henry Lord (* '62) and Wm. Preston Graves ('62), and with his "heavy field-battery" of 4 20-pdr. Parrotts had maintained the contest with two full 6-gun batteries, and a section of another until one gun was so disabled as to compel its burial, and the battery itself was ordered by Gen. Stevens to withdraw. The divisional artillery of Reynolds, under Ransom, with that officer's "C," 5th, had sustained severe loss, both in men and material as the broken columns of the Federal forces fell back before the final furious charges of the enemy. It is an acknowledged fact that had not a hurriedly assembled artillery force been massed on the Henry house hill on the afternoon of the 30th, the disaster that befell it "would have been fatal to the Army of Virginia." There the defense was gallantly maintained for two hours, when the batteries were ordered to retire to Centerville. Prior to the battle, "H" and "I," 1st, had been sent to Washington and placed in the defenses.

The nature of the battle had afforded little scope for artillery; the batteries, moving with their respective divisions, had taken up positions and delivered their fire as opportunity offered, but without much regard to concert of action, which was scarcely practicable under the circumstances. However, according to Gen. McDowell, "the Regulars had saved the day," referring, of course, to the combined efforts of the three branches of the service.

At Chantilly (or Ox Hill), Sept. 1st, "K," 1st, was again called upon, as was "E," 4th, where the two distinguished general officers and former Regulars, Stevens and Kearney, were lost to the Union cause.

[TO BE CONTINUED.]



THE UMPIRE SYSTEM AT THE FRENCH AND GERMAN MANEUVERS, 1909*

TRANSLATED BY LIEUT. W. F. H. GODSON, TENTH CAVALRY,
FOR THE GENERAL STAFF.



ONE of the most interesting details of the last autumn maneuvers was the importance given to the umpiring, the service of which was specially organized and has already been commented on in our columns.

The subject is sufficiently interesting to warrant a glance at the methods in vogue in France with a comparison with the system adopted on the German side of the frontier.

IN FRANCE.

In his report on the close of the Bourbonnais maneuvers General Tremeau commented upon the excellent service of the umpires and attributed to it the absence of impossible situations and the natural solutions of the various problems. These comments were approved and coincided in by the participants as well as by the representatives of the military press who followed the operations. It is therefore of interest to consider the organization and service rendered by the corps of umpires.

As we ourselves followed these maneuvers closely we had a very good opportunity to see what work was done and to form a pretty true opinion.

General Pau, the chief umpire under the immediate direction of General Tremeau, had at his disposal a body of officers whose duty it was to receive and consolidate information by the following means:

The theater of maneuvers was covered by a network of telephone wires, at the disposition of the chief umpire and the director of the maneuvers, which permitted the rapid transmission of information between the field umpires and the chief umpire and the instructions of the latter with such information as he might desire to give bearing on the general development of the situations. The umpires in the field used the telephone to the fullest extent in keeping their chief posted as to situations and decisions.

*From *La France Militaire*, November 2-4, 1909.

The telephone central was the headquarters of the officers acting as assistants to the chief umpire and taking part in the direction of the maneuvers. General Pau made his headquarters here when not off in his automobile, keeping in personal touch with the moving troops and being on the spot at times and places of special importance. This central was also headquarters for the visual signal service and an automobile was on hand for courier work in such localities as were not covered by the telephone or visual signal service. The umpires were first divided into three and then into five groups. One of these groups followed the cavalry division which it umpired as well as the opposing troops. This method was found necessary on account of the great mobility of the cavalry. The four other groups were independent as to camps and movements of the opposing sides. Every evening they studied out the plans and intentions of the commanders for the next day, divided the terrain of action amongst themselves, decided on the probable points of contact and made arrangements to properly cover the area of operations. The senior umpire of each group made the assignment of the umpires in his group.

At the close of the maneuvers the umpires reported to headquarters the orders and instructions and the intentions of the commanders they observed. These reports were the basis of the compilation of the operations of the opposing troops and kept the director of the maneuvers and the chief umpire continually posted as to the progress made.

In addition to this force of umpires there was on the staff of each commander and with the commander of the cavalry division a special umpire whose duty it was to communicate to the chief umpire the orders, intentions and instructions given by their commanders. Thanks to this provision the chief umpire was able to receive advance information before it reached the subordinate commanding officers and advise his umpires in the field as to probable movements and developments, thus making intelligent team work possible.

The system was well developed and would have worked even better if the telephone system had been a little better and if more automobiles had been available. The good results obtained appeared to be due also to the excellent organization of the corps of umpires and their reports from the field of the decisions given and the movements of the troops.

These results were due to the careful selection of the officers

detailed as umpires who were not this time selected at haphazard, as has so often happened before, from general officers, or officers of senior rank from troops not taking part in the maneuvers, but they were taken exclusively from officers who by their special aptitude and military accomplishments were specially qualified to perform the delicate and important duty of umpires.

We may say in closing that recommendations were made by several of the umpires that each umpire should be attended by several young officers, lieutenants or captains, well mounted, and good horsemen, to act as assistants in their section of the terrain, covering the ground and keeping them *au courant* with events and to carry simultaneous decisions to opposing forces. This would be a very good thing to do, not only because it would give increased efficiency to the work of the umpires, but because of the very valuable experience it would provide for the young officers so employed, who should have sufficient good judgment to enable them to size up and report upon the tactical situations and to carry with tact and clarity the decisions of their umpires.

The younger officers of the general staff appear to us to be well suited for this work, and it would also be an excellent school for the officers of the other arms.

IN GERMANY.

The Emperor has always exercised personally the functions of directors of maneuvers and chief umpires. This year he had to assist him five assistant chief umpires, of which number General von der Goltz was one, and seventeen umpires taken from the general staff who were either general officers or senior officers of that corps with few exceptions.

Each of these umpires was accompanied by several assistants as aids and intelligence officers who were taken from the general staff or detached from service with troops. These officers were well mounted and covered the theater of operations, observing the movements of the troops for the information of their umpires.

This personnel had at its disposal the following means of communication:

(a) A telephone and telegraph system specially reserved for the use of the director of maneuvers and the chief umpire, and umpire force. This system was so arranged that each um-

pire could, from any part of the field of operations, obtain easy communication with the chief umpire and exchange information as to the progress of the action.

(b) Automobiles, vehicles and motorcycles to rapidly carry information to the umpires and their assistants in case of need.

(c) A number of cyclists, this year two entire troops, were placed at the disposition of the umpires as orderlies, couriers, messengers, etc.

It is a curious fact that this scheme corresponded exactly with that which had been so successfully conceived and carried out at our maneuvers at Bourbon, under the direction of General Treneau by General Pau.

The only matter of regret in our case was that the umpires were not better provided with means of communication and transportation.

TRANSLATOR'S NOTE.—This is a short sketch of the system of umpiring at the French and German maneuvers. From an experience as an umpire at the maneuvers at Fort Riley, in 1908, the greatest difficulty I met lay in not knowing what the opposing forces were or had been doing and the fact that the umpires were assigned to certain troops and were more or less limited. This seems to have been overcome by the French method and the system of telephone and telegraph communication at the disposal of umpires.





CAVALRY ON A SCOUTING EXPEDITION.

Cadets in the National Military Training School of Mexico are given continual practice in exercises simulating actual warfare as nearly as possible.



WALL SCALING.

"This is done by two cadets using a rifle held horizontally between them as a support with which to raise a companion to the top of the wall. When the groups of two remain alone on the ground, one mounts to his companion's shoulders and is helped to the top of the wall, when he in turn trails his rifle for the remaining soldier to climb hand over hand to join his comrades."—*Int. Bureau Am. Republics.*

MEXICO'S MILITARY TRAINING SCHOOL.*

By JOSÉ ROMERO.



BECAUSE of numerous vacancies in the ranks of subordinate officers of battalions and regiments, and the small number of officials graduated from the Military College, in addition to other reasons, the War Department of the Mexican Government, which at that time was under the direction of General Mena, submitted a bill, approved by Congress on December 7, 1904, in the form of a decree, by virtue of which the "Escuela Militar de Aspirantes" (Military Training School) was established. The school has for its object the training of subordinate officers for the infantry, cavalry and artillery service. The institution was opened on January 29,

*Reprinted by permission of the *International Bureau of American Republics*, to which the *JOURNAL* is also indebted for use of the plates illustrating the article. [EDITOR.]

1905, in the remodeled building of the old factory of Santa Fe, in Tlalpam, which had been acquired by the Department for that purpose. The rules and regulations now in force in the school were issued at that time, according to which it was specified that young men desiring to enter the school must be Mexicans between 18 and 21 years of age. In the case of minors it was necessary to obtain the consent of the father or guardian. Further requirements provide that the candidate shall have finished a course of primary instruction, shall be of good character, vaccinated and possessed of the health and physical strength necessary for the pursuit of a military career.

Young men having the foregoing qualifications and who wish to enter the school are required to apply in their own handwriting to the Secretary of War and Navy, accompanying their applications by documents stating their ages and civil condition as well as by certificates showing their academic and social training. At the bottom of the application the father or tutor must give his consent in writing to the entry of the applicant into the army as a prospective officer. Applications are to be made so as to reach the War Department in November or during the first half of December, also in May and during the first half of June, of each year.

If the applications are accepted, and after the medical examination certifying to the physical fitness of the candidates for the military service has been made, the applicants enter the training school on July 1 and January 1, respectively, and are enrolled therein in due course. Record is made of the class of officers the applicants desire to become and of their agreement to serve as such during the time they attend the military training school and in the army for a period of five years thereafter, the latter time to be reckoned from the date they leave the institution.

Young men admitted as candidates must apply for entry into the school on the dates already mentioned, and pursue therein three theoretical-practical courses of six months each, and after separately completing said courses enter such battalion or regiment as may be indicated by those in charge of the school for a course of practical instruction. After a year's service as sub-lieutenants in the reserve army, if they have shown evidence of ability and of a military spirit, they will be transferred into the Regular Army.

Cadets are allowed 73 cents Mexican money per day for



SPECTACULAR JUMPING.

Cadet accomplishing a difficult equestrian feat. Notice the jump is being made without use of the bridle and with stirrups crossed.



A NOVELTY IN STEEPLECHASING.

Cadets, in a race, taking the table jump used as one of the obstacles in a military steeplechase.

board and other minor expenses; are given 50 cents weekly as a loan; and are allowed an additional amount of 60 cents a day for the purpose of forming a fund to be applied in the purchase of equipment and uniform to be used in the school, which becomes their property on leaving the institution and comprises their first equipment as officers.

Cadets are subject to military law for crimes and misdemeanors committed by them during the time they are in the service. The cadets live in the school, take their meals there,



CAVALRY PRACTICE.

Cadet dominating fractious horse. Notice the good seat and light hands of the rider.

and only go out on Sundays and national holidays, or by permission and according to the judgment of the commandant.

The studies of the half-yearly theoretical-practical courses are, for the first six months, rules and regulations; auditing and military accounting; geography in general; elements of history, arithmetic, and algebra; elements of Spanish grammar and panoramic drawing. For the second six months the studies embrace tactics with the weapon used in the department to



INFANTRY MANEVRES.

Cadet company on a practice march, carrying complete service equipment. During these exercises the prospective officers undergo the hardships endured by the private soldier.



"MONKEY" DRILL.

Bareback gymnastic exercises with moving horses.

which the cadet is assigned; campaign fortifications; practical knowledge of explosives and elements of physics and chemistry; military jurisprudence and law; geometry and trigonometry; topographic drawing. For the third six months the studies comprise general tactics or the use of the three weapons, including the application of themes relating to maps or charts of the country; theory and practice with small fire arms (or artil-



EXERCISES IN EQUITATION.

An instructor clearing a table with bar held above it, showing that none of the usual table equipment would have been disturbed.

lery); communication and work in the field; military topography; military hygiene and military horsemanship for mounted officers.

In addition to the foregoing, during the three six-months' terms which make up the course, the cadets are instructed by a special professor for each subject in physical culture, swimming, fencing and marksmanship with the revolver. Infantry cadets have a special six months' course in horsemanship, and mounted cadets are instructed in this branch during the entire

period of the three six-months' terms. The cadets also receive military instruction in the interior service and management of the institution, as well as in maneuvering in solid phalanxes and instruction in campaign operations during the entire period of their training, daily practice being given them under the orders of the captains in command and in conformity with the programs approved by the commander.

During the first years of the school the theoretical-practical courses of instruction were limited to two terms, and one term of practice in the service of the ranks. Experience, however, induced the commandant of the school to broaden the course to the extent of the studies which now obtain.

All the professors of the school must be military men of acknowledged ability and practice in the subjects they teach. The school naturally seeks to impart instruction to the cadets along all lines of useful knowledge, with particular reference to a military career. The staff of teachers consists of twenty-two professors.

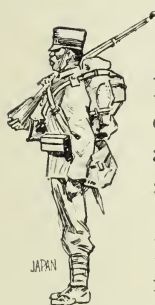
Examinations are held during the first two weeks of June and December of each year, no grades being accepted that fall below the approved standard known as the "three B's."

It is reported that the able director of the school, Lieut.-Col. Miguel Ruelas, has submitted new rules and regulations in detail that are most appropriate for the needs and growth of the institution, and considering his natural ability and the desire he has to correct such defects as his experience of nearly five years has shown him exist, these regulations will undoubtedly be approved by the War Department. Under the new regulations the artillery battery will again be established and the course of instruction extended to four terms of six months each.

The present budget provides \$174,551.35 Mexican money for the use of the institution, not including items of forage for 98 horses and 6 mules now in use at the school, and the keep of which is charged to the general expense account of the Department of War.

JAPAN: THE DEFENSE OF HER COASTS.*

TRANSLATED BY FIRST LIEUT. L. C. BRINTON, JR., COAST ARTILLERY
FOR THE GENERAL STAFF.



THE Japanese are partial to the offensive, superabundantly proven during their last war. But like all people anxious to preserve the inviolability of their territory, they have not neglected to prepare a good coast-defense to keep off the enemy from their shores and ports.

A superfluous precaution, one is tempted to say. In truth, nature has wonderfully favored the Japanese. Japan, the England of the Orient, is almost invulnerable. But the Japanese have wished to make it wholly so. They are exceedingly fanatical and cannot suppress their emotions as the Russians on the cruisers at Vladivostock, or on Rojestvensky's Fleet, or even later on the United States fleet, in its mysterious mission around the world visiting Japan in its course.

Besides, a good offensive is essential to a good defensive. The Japanese have prepared their coasts, armed their ports, constructed points of support and prepared a redoubt for national defense. They have supplied with cannon, munitions and material their forts extending toward the continent and throughout the archipelago.

The *Nichi Nichi Shimbun* has published that the scheme of coast defense is practically completed, the only incomplete part thereof being the works in the bay of Tokyo, and but two years will be required to complete these.

The principal points whose fortification is completed are: Nagasaki, one of the most important commercial ports of Japan, likewise possessing one of the most important pieces of construction work—that of the Mitsu Bishi Company; Sasebo, a military arsenal and base of operations in case of war with China; Maizuru, an arsenal on the island of Nippon; Kago-shima, an artillery arsenal, powder and cartridge factory on the island of Kiushiu; Hakodate, on the island of Yedo, situated on the Strait of Tsougarou. The Gulf of Tokio is protected

*From the *Comite de L'Asie Francaise* for April, 1909.

by an important fortified group which protects from attack the capital, with all its military establishments, the important commercial port of Yokohama, and the military port and arsenal, Yokosuka. This group will be provided, like all the other groups, with the most modern fire-control equipment, search-lights, observation towers and submarine mine material. It is worth noting, in this connection, that the Japanese do not hesitate to give to their batteries high command, exception being made to those used in the near defense, which are emplaced so as to give them a raking fire.

The island of Tsoushima has been strongly fortified. In Formosa the fortifications are stronger in the north, around the ports of Kelung and Tamsui. The defense of the Pescadores embraces several forts, the most important being around its capital, Makung.

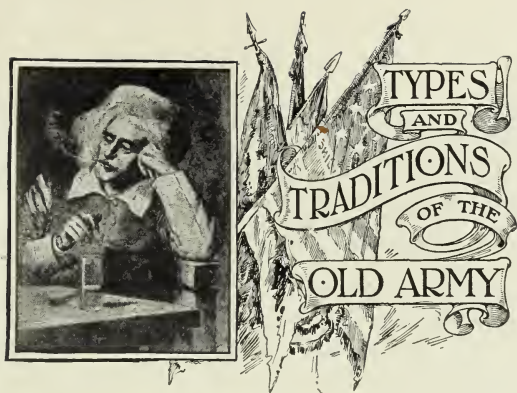
To the organization of a central "redoubt" the Japanese have devoted the most attention. They have an almost natural redoubt, the Inland Sea, which needs but little effort to render it impregnable.

The Inland Sea extends from the eastern extremity of the large island of Nippon to the southwest, past the islands of Shikoku and Kiushiu. It communicates with the sea by four straits; those of Isumi, Naruto, Simonoseki and Boungo. These straits are all defended by fortifications. The first three are straight and easy to defend. The fourth (between Kiushiu and Shikoku) is very large and easy of access to a hostile fleet. The Japanese have also erected a last barrier between the north coast of Shikoku and the southern coast of Nippon. They have organized defensively the passages of Geiyo and Kaikyo commanded by the height of Kure, passages already naturally difficult, winding in and out through numerous islands.

The principal points fortified on the Inland Sea are: Simonoseki-Kokura-Moji group, defending the Simonoseki-Moji passage and possessing an arsenal; Kure, the largest and most important military port in Japan; Hiroshima, with Ujina, a point of embarkation for troops; Kobe and Osaka.

Their coast defense is undoubtedly very strong.

This article is of some value in showing the location of the Japanese coast defenses, and would, perhaps, be of more value to the navy than to the army. This information could easily be placed in readily accessible form by transferring the data to a late map of Japan.



AN UNOFFICIAL MEMORIAL DAY

BY MISS ETHEL MORSE.*

FOR more than fifty years Mrs. Mary A. Redpath, one of the few remaining women "abolitionists" of Massachusetts, has lived in a quaint old house set in a garden in Malden. Years earlier, even, when the American phase of the woman's suffrage question was an infant, its clamorings barely heard amid the turmoil of larger political events, Mary Abigail Kidder was prominent in Causes. A widow in the middle fifties, she married James Redpath, a zealous man. Together, then, they plotted and planned, worked in the dark or cried in the open for the abolition of slavery, for the absolute equality of the sexes and for the rights of prisoners. They objected to the "barbarism" of private property holding and advocated municipal ownership.

At the age of seventeen Redpath was a typesetter out of the backwoods of Michigan; at nineteen he was an associate editor of the New York *Tribune* when it was owned and managed by Greeley and Dana. A few years passed and he was off to the southern States to study conditions at first hand. He came back shouting battle-cries. Swayed by the noble fanaticism of John Brown the zealous Redpath nearly forfeited his life in the futile attempt that was made to induce Brown to attempt the escape from his prison at Harper's Ferry. When the war clouds gathered Redpath became a war correspondent for his old paper, the *Tribune*. He was at Atlanta with General Sherman, and with General Thomas at the Battle of Nashville. Author, editor, publisher, agitator, reformer and Haytien colonizer, Redpath rocketed through troublous times in a picturesque career. He was never without peculiar power and influence, and in his last days, in 1887, ruminated in an editorial chair of the *North American Review*.

*Miss Morse is the grand-daughter of Mrs. Redpath.



MRS. JAMES REDPATH.

Mary, his wife, was zealous too. She says frankly that in those days there were more than enough women ready to sew on buttons. She infinitely preferred to do something more striking, such as valiantly journeying to North Elba in the depth of winter to console the stricken family of John Brown, and to collect material for the "Life" that was to be written by her husband. She spent hard weeks in the effort to interest the public in the education of negro children. Gifted with fluent speech she knew no reasons for remaining silent, and so she lifted up her voice and spoke, usually effectively, on all occasions.

It is easy to conceive what reminiscences lurk in the old house in Malden, that await the call of curiosity to come out from their hiding-places in chests full of old letters, locked bookcases and ribbon-bound boxes.

One morning a few weeks ago an open window overlooking the garden let in a cool breath of air that was scented by the softening ground and the starting sap. My hostess shivered, and drew her Shetland-wool shawl a trifle closer. She said the odor of spring made her think—made her think—. She stopped speaking, but the thinking process went on, and I who watched her face saw its wrinkled mask glow, sadden and brighten as mental moving pictures flashed upon the screen of her memory. I ruthlessly opened the window again, for a moment, to let that magic odor enter. Helped, perhaps, by the harsh cry of an early jay-bird in the pines, the thronging memories became so many that the little old lady had to share them with someone. With a commanding gesture she ordered me to sit in the low Shaker rocking-chair at her feet, and I understood that I had been chosen to listen.

"It is not very long before Decoration Day will be here. Did I ever tell you how Mr. Redpath and I once planned and carried out a Decoration Day of our own down in Charleston, South Carolina, in the spring of 1865?

"It was only a few weeks after General Sherman's army had come up through the southern coast States and had captured Columbia. The Confederate Army had made a long, heroic defense of Charleston, but it evacuated the city after the fall of Columbia, and it was occupied by our troops under General John Porter Hatch, commander of the Fifth Division, Department of the South. The governor of the city was Col. William Gurney, of the 127th New York.

"Charleston was in a deplorable condition when our troops marched in; one-fifth of the city had been burned in 1861, and when we were there four years later the ruins still stood in all their desolation. They had even been increased by the havoc of the bombardment. Everywhere prostrate walls and ruined gardens told where beautiful dwellings had once risen. The public buildings, the warehouses, stores and private houses had first been shelled by the guns of the Union Army and Navy batteries, and then fired with the torch by order of the Con-

federate officers when their army was leaving the city. It was a sad place; a terrible example of the horrors of war.

"Few white people remained in the city. Those who did were crushed by their vicissitudes, but they were bravely striving to adjust themselves to new conditions. Southern women, as well as their former slaves, accepted the rations issued by General Hatch for their relief. The streets were paced day and night by bewildered planters whose plantations had been abandoned by the liberty-crazed negroes. Southern business men were confronted with the necessity of resuming trade with paid negro help, and few possessed the money to even settle current expenses. The colored people, who were of course unaccustomed to freedom and longed to enjoy its delights to the full, often committed excesses that were absurdly childish. Others, however, with the desire to earn something, if only a trifle, hawked vegetables about the streets. Some opened little stalls in the long market running from Market Street to the harbor, and managed to make a bare livelihood by the sale of meat at high prices.

"It was the moment for the workers of the North, the abolitionists who had helped to bring about the emancipation of the negroes, to demonstrate some of their theories, particularly that of education. Many realized that their opportunities had come, and by beginning to go South in April of that year made the first move in the great Reconstruction scheme. Led by such men as Wendell Phillips, Henry Ward Beecher, the latter's brother, Colonel Beecher, William Lloyd Garrison, Gerritt Smith, Theodore Tilton and Gilbert, the brother of Parker Pillsbury, they flocked into Charleston. Those were days of eloquent speeches and of earnest efforts to reconcile the brave men who had faced each other on battle-fields. Henry Ward Beecher never surpassed the two-hour-long speech he made one day in April to a party of people who had chartered a boat and had come down all the way from Boston to visit Fort Sumter.

"James sent for me to come too. I packed my trunks in one night, and took the steamer for Charleston, leaving my daughter at home in the care of a faithful friend.

"My husband was filled with enthusiasm by the triumph of abolitionist principles; he resigned his position as war correspondent and gave his services to the schools of South Carolina as Superintendent of Public Education. His offices were accepted by General Hatch in behalf of the white men, and for the negroes by General Saxton, representing the Freedmen's Bureau.

"Mr. Redpath devoted himself untiringly to the cause of education. During his four-months' stay in the city he reorganized all the day-schools and established evening schools for adults. He also instituted a public reading-room and library for freedmen, recruited the first negro military companies in the city, and founded a colored orphan asylum, which was named in honor of Col. Robert G. Shaw, of the



Study for bas-relief by J. E. Kelly.

MAJ.-GEN. JOHN P. HATCH, U. S. V.

Fifty-fourth Massachusetts Regiment, who was killed in the assault on Battery Wagner.

"So, when I joined my husband I found him deeply engaged in congenial work. His various enterprises absorbed him, yet amid his many activities James did not neglect any opportunity that offered to render homage to the memory of the gallant soldiers who had acquitted themselves so nobly.

"One of the most forlorn sights in Charleston was that of the rows of unmarked graves of the Union soldiers who had died and been buried by their surviving comrades on the Washington Race Course, a tract of ten acres, about one mile outside the city. More than ten thousand prisoners of war are said to have been herded there at one time. Charleston had been a central point of strategic operations, and had contained an immense number of captured Union soldiers. Mr. Redpath was particularly concerned in regard to the neglected condition of those nameless graves. It was shocking to see the last resting-places of our soldiers desecrated by the hoofs of horses and the feet of thoughtless men.

"Prior to the departure of General Sherman a movement was started to build a fence around the spot, in order to keep out trespassers, and to so improve its appearance as to make it more in keeping with the beautiful Magnolia Cemetery not far from it. A committee was formed, and this circular sent out to the white people known to be in sympathy with the movement, and to all the colored population. It was even posted in all the outlying towns held by the troops."

Mrs. Redpath turned to the little sewing-table near which she can usually be found sitting, and took from a partition in the upper drawer a sheet of thin, tough paper which bristled with capital letters.

"'MEMORIAL TO THE LOYAL PEOPLE OF SOUTH CAROLINA,' she read aloud, with a proud inflection that the years have not changed.

"'It is an established fact that a large number of our soldiers died * * * on what is called the Race Course, in the city of Charleston. It therefore behooves us as a loyal people that a fitting testimonial be made to the memory of those brave men who * * * were buried * * * with nothing to mark their last resting-place or to protect their remains. A Committee has been formed to raise a fund to erect a suitable Monument and a Fence to protect it, in honor of those brave soldiers who died in defense of their country, and we do hereby call upon every loyal man, woman and child in the State of South Carolina to aid us in the work, and respectfully ask Ministers and their Congregations to form committees to raise funds. The contributions have been limited to ten cents each, so that it will give everyone the privilege and debar none from aiding this noble work.'"

The pathos of its rushed over me, and I saw six watery-blue jays bustling about in the grove where before there had been but one. The

little old lady's voice went on without a break; she had been taken possession of by the stern, untearful spirit of those lost days:

“South Carolina alone should do the work, and raise ten thousand dollars to complete it, and show the world that * * * her children have not forgotten the duty they owe to the defenders of our starry flag.”

She quietly took up the tale: “There was a central committee. On this James Redpath's name was first; then came the names of Timothy Hurley, Charles H. Albee, Dr. Hawkes and John Everett, Gilbert Pillsbury, the Reverend Mr. Corey, R. C. De Large, T. M. Holmes and Francis Desverney. The last named was a loyal member of an old Charleston family. There were six honorary members, representing the outlying towns of Beaufort, North Edisto and others. Among these members was Colonel Beecher, who was occupied in the educational work of the State.

“The response to the appeal made by this little circular was immediate. At a large assembly in Zion Church, in Calhoun Street, at which more than five thousand negroes were present, a call was made for volunteers to build a fence. Slowly, and then more quickly, as the idea penetrated their minds, the men responded, at first by raising their hands, then they sprang to their feet and shouted, for they were eager to show their gratitude to the army and this suggestion pleased them. They agreed to join in the work, and promised to secure lumber and the other necessary materials. Addresses were made by members of the committee, and by our good friend General Hatch, who was also present. Probably seeing in my face that I wished to speak the general unexpectedly announced my name as one who would follow him. I was not then well accustomed to public speaking but I was so deeply moved by the emotional cries of the audience that I forgot my fears and talked for I do not know how many minutes. The words rose in my heart and poured out of my mouth. I cannot remember now what I said, but I know they must have been burning words, for all over that great hall the colored people answered with earnest ‘amens’ and groans, camp-meeting fashion. Once they even burst into song, and I waited, standing on the platform until their voices had subsided. At that instant I recalled the desire of my husband that after the fence was built the graves of those poor boys should be covered with flowers for the first time. I cried out to the people before me: “And when the big task is finished bring your Mayflowers to the Race Course, and cover the graves of the men who died to set you free! Go out into the fields and woods and roads to gather them. Bring them into the city and heap them higher and higher on that blood-soaked ground. Cover the graves until nothing can be seen but flowers!”

To this suggestion also the negroes gladly responded. When the fence was built a final meeting was held, and at that Mr. Redpath ap-

pointed May 1st for the ceremonies at the Race Course, which were to be finished by the decoration of the graves.

"In the early dawn of that day parties of negroes began to pour into the city from the country, carrying flowers which had been picked the day before and carefully arranged in bunches. The people of the city had ransacked the abandoned gardens for tribute, and the air was sweet with the fragrance of jasmine. The dusky crowds surged through the streets, making the old city gay with their branches of flowering shrubs and trees. The women were all in gala attire. They wore brilliant calico and chintz dresses, with crossed kerchiefs, relics of slave-times. On their heads were gorgeous madras turbans of many colors. On the way to the burial-ground I noticed one old man—I think he was a newspaper carrier employed by the *Courier*—who was hobbling along with the help of a staff. He was so feeble that but for the aid of the stick he would have been almost on all-fours; but he pluckily kept up with the rest, and was laden with wreaths which someone, probably his great-granddaughter, had woven for him.

"General Hatch's carriage had been in waiting at the door of our hotel since the early morning and at eleven the general and I entered it. My husband mounted a horse, which he rode beside the carriage. So great was the enthusiasm that we had not gone far before some colored men stopped us and, taking from the carriage the beautiful white horses which drew it, harnessed themselves to the pole and ran with us all the way out to the Race Course. Along the road, as we passed, the negroes saluted us by calling out our names, waving their huge bunches of flowers and giving incoherent cheers. Occasionally a bunch of flowers would be tossed into the carriage, and General Hatch and I were soon covered with clusters of blossoms, flying petals and leaves. In the distance, at the head of the column, we could hear amid the din the sound of dirges played by the band of the citadel, and the tramp of the soldiers who formed our escort.

"On arrival at the Race Course speeches were made to the throngs which had followed us, and at the conclusion of the brief ceremonies the work of decorating the graves was begun. It was a wonder where all the flowers came from! To Northern eyes the sight was extraordinary, especially at that time of the year. But there they were, in rich profusion—lilacs, white and yellow jasmine, mock orange and hawthorn blossoms, and the first buds of the luxuriant small yellow rose called 'cloth-of-gold.' Some of the graves were said to have been piled ten feet high with—wild flowers, to be sure, but every blossom thrown thereon by some poor soul whose heart was swelling with gratitude for the priceless gift of liberty. All the afternoon was spent in this way. The people scattered over the dismal place which through our efforts had been brought to a degree of order, and it was soon cheerful with flowers and small flags; the latter crude, home-made affairs for the most

part, but all good enough to show the interest taken by the loyal citizens of Charleston on this day of memorial of the dead.

"Before the last flower had fallen the glorious, great southern moon had risen. Our return to the city, another triumphal progress, was made by its light. As the carriage passed Magnolia Cemetery I looked back and my heart beat fast with awe at the strange sight of the masses of gray live-moss hanging from the boughs of the ancient cypress trees, their ends touching the ground. They cast long black shadows in the moonlight, and to my excited fancy they seemed like giant sentinels which we had left there as a guard of honor to the graves of the Boys in Blue.

"With empty hands the colored people swung along beside us, pressing close to the carriage. Their bare feet beat rhythmically on the brick pavements and hard roads, keeping time to the exulting strains of "John Brown's Body" and other familiar tunes. They seemed like troops of ghosts, and their light garments rustled mysteriously in the night-wind.

At intervals, when the band stopped playing, they broke into their own songs, all characterized by peculiar transitions and wild portamentos. Some of them were full of melody, however; I can hear to-day one high, sweet soprano voice singing the verses of:

'Starry crown, starry crown,
Starry crown in de heben fur yo'.
Starry crown, dere's a starry crown,
An' can yo' stay away?'

After each stanza came the deep, wistful response from a hundred throats:

'Ah k'ant stay away, mah Lord,
Ah k'ant stay away, mah Lord,
Ah k'ant stay away, mah Lo-o-r-r-d,
Ah k'ant stay away!'

Another song that was sung that memorable night was one that had a pathetic significance in view of their new dependence upon their own efforts. It was another camp-meeting hymn, of which the quaint refrain was:

'Keep a-inchin' along laike de pore inch-worm,
Jesus will come by-an'-by.'

They would repeat this over and over, with almost unbearable insistence,

'Keep a-inchin' along, keep a-inchin' along,'

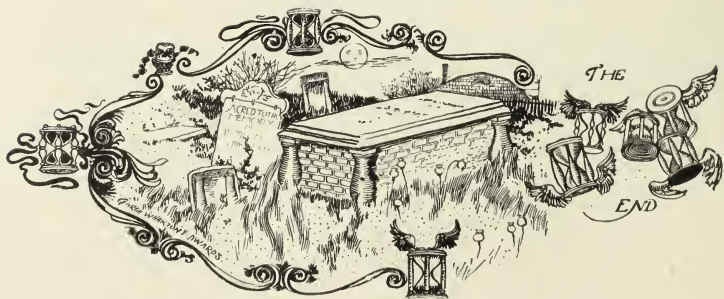
until it seemed as if I couldn't endure to hear another repetition of that resigned yet mournful note.

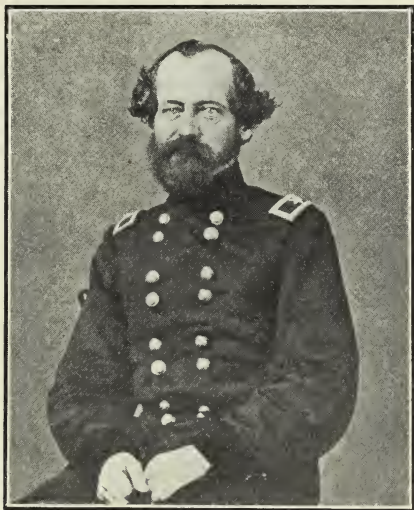
"The whole affair made a profound impression upon General Hatch. After it was all over he remarked to my husband that on that day had been originated a beautiful custom which he would be glad to see continued. Both he and Mr. Redpath lived to see many such days, for after a few annual celebrations the custom was made national by the order for Memorial Day issued to the Grand Army of the Republic in 1868.

"I was told by my daughter," continued Mrs. Redpath, "that when she met General Sherman in Washington several years later he told her he had not forgotten his feeling of intense gratification when the event was duly reported to him. He believed, he said, that the picture should never leave him of the contrast that must have been presented by that flower-strewn burial-place on the Race Course to the field of desolation that he saw there when he first entered Charleston."

She ceased and fell into meditation. As I looked up at her from my low seat in the little Shaker chair I confess I envied that once active woman her stirring memories. I was even regretful that probably not in my day and generation would such mighty events as the struggles of the Civil War be known; for if it is only amid difficulties and hardships that the moral part of man's nature declares itself, it is no less true that the moral strength of a nation can only be measured by the opposition it offers to disintegration or corruption.

Together we put the pathetic little Memorial Circular away in the sewing-table drawer. Then Mrs. Redpath sighed once, smiled and slowly came back out of the past to take her accustomed place as the quiet Vestal of the Hearth.





BRIG.-GEN. LEWIS G. ARNOLD, U. S. V.†

FORT JEFFERSON AND ITS COMMANDER IN 1861.

COMPILED FROM THE OFFICIAL RECORDS AND OTHER AUTHENTIC SOURCES

BY JOSIAH H. SHINN.*

THE following letter addressed to Major Arnold by Colonel Brown shows the tremendous solicitude felt at Washington, and as well at Scott's headquarters, over the retention of Fort Jefferson, and the tremendous importance of that fort to the Union cause:

“HEADQUARTERS, DEPARTMENT OF FLORIDA,
TRANSPORT STEAMSHIP ATLANTIC,

April 15, 1861.

“BVT.-MAJ. L. G. ARNOLD, Commanding Fort Jefferson,

“MAJOR: My short stay at your post and the hurry of business prevented my conversing with you so freely as I could have wished on the defense of the fort. The importance of Fort Jefferson can hardly be over estimated, nor can I too strongly impress on you the importance of the constant exercise of every precaution and of the most unceasing vigilance against surprise. Your post may not be improperly considered the Gibraltar of America, and you should guard it with the same jealous

*Continued from May JOURNAL.

†The close of General Arnold's military service came on October 18, 1862, at New Orleans. On that day, in company with Generals Butler and Thos. W. Sherman, while reviewing the troops of General Weitzel's brigade, he was seized with a stroke of apoplexy while sitting on his horse just as Weitzel's men passed by. General Sherman, who was by his side, caught him as he fell from the saddle, and he was taken to his quarters, where he remained in an unconscious condition for some time, the surgeons in attendance despairing of his life. Upon regaining consciousness, it was discovered that his whole right side was paralyzed, and also his speech to the extent that he was never able thereafter to utter a single articulate word. He was ordered to his home, and all hope of his recovering being abandoned; he was retired from active service for “disability resulting from long and faithful service and disease contracted in the line of duty.”

vigilance you would were you at war with a strong maritime power. No vessel, government or merchant, should be allowed to approach without being boarded and, if necessary, required to heave-to for the purpose. Your guns should be habitually kept loaded and ready at a moment's notice to be fired; a sufficiency of ammunition always prepared for immediate service and the officers and men assigned to the positions, so that by day or night each can at a moment's notice be at his post. Your draw bridge should always be raised at night, the embrasures closed and fastened, and the guards by day and night required to the observance of the greatest possible vigilance. The troops must be impressed with the necessity of almost constant fatigue in mounting guns, erecting batteries, laying platforms, etc., and other necessary work, and encouraged to a cheerful compliance with the exigencies of the service.

"I am aware, major, of your zeal and ability and of the excellent discipline that has characterized your command, and I doubt not that you will have anticipated these suggestions. If so, no harm has been done, and I wish, if any here made may have escaped you, that you will without delay give them your attention.

"I am, sir, very respectfully, your obedient servant,

"HARVEY BROWN, Colonel Commanding."

It is unfortunate that the answer of Major Arnold to the foregoing letter of Colonel Brown is not in our possession. But we are not without evidence, not only that Major Arnold had anticipated many of the commands given in the letter, but that he took immediate action to carry the others into effect, especially that part of the order referring to the approach of vessels to the fort.

Gen. William Montrose Graham, who was in the fort at the time of Colonel Brown's visit, and who remained there for many months thereafter, in an interview in April, 1906, said:

"It was thought at that time that the Confederates would attempt to capture the fort in order to make it a base of supplies. Arnold recognized the danger and took every precaution to thwart any possible effort of the kind. He issued an order that blank shots were to be fired across the track of every approaching vessel. These shots always brought a show of colors, and the passage of the officer of the day from the fort to the vessel to prepare it for Arnold's visit of inspection, in person, which always followed.

"One day Lieutenant Benson was officer of the day, and at a certain hour a vessel hove in sight approaching the fort. A blank shot was fired across her prow, but without effect. The vessel moved on. Then Arnold ordered a ball to be sent just athwart her bow. This brought her to a stand; it also brought her commander Ronckendorff, lieutenant commander of the United States Navy, to the deck, and sent the stars and stripes to the mast. Lieutenant Benson went aboard, and after him followed Major Arnold. The commander fumed and swore that his flag has been insulted, and that he would report the insult to the proper authorities at Washington. Major Arnold replied with great suavity: 'Commander, I could not insult your flag, because by doing so I would

insult my own; but, sir, as a soldier, I am here to obey orders, and my orders are to allow no vessel, Government or merchant, to approach the fort without being boarded, and, if necessary, to require her to heave-to for that purpose.' This answer of the major caused Commander Ronckendorff to assume a much milder tone, but did not fully appease his wrath. Major Arnold, with a tact that never deserted him, left the ship and went ashore; he then sent an officer in full uniform on board the vessel with an invitation to the commander and all his officers to dine with him that afternoon. In full-dress both army and navy officials appeared, and the affair came off in great shape. Under the influence of the good food, good wine, good manners and the extraordinary good nature of Arnold, the commander lost his resentment and lent himself to the true spirit of the occasion. Before leaving he asked to be introduced to the man that fired the last shot, and when Lieutenant Benson was presented said: 'My good fellow, one more turn of my wheel and you would have sunk my vessel.' Thus ended what at one time seemed to be a most unpleasant affair.

Colonel Brown upon leaving Fort Jefferson took with him twenty-one negroes, whom Major Arnold had hired from their masters and owners at Key West as laborers. Colonel Brown simply ordered the overseer and the negroes aboard his ship, and they obeyed. Major Arnold thought nothing of the matter at the time, but soon learned that Colonel Brown had made a very serious mistake whose consequence would have to be borne by Major Arnold. These negroes had been hired by Major Arnold to do work at a certain place under contract, and were not under the control of Colonel Brown or the United States. Major Arnold himself would have had no right under the law to work these negroes anywhere save the place stipulated in the contract. When the news reached Key West that Colonel Brown had sailed north with twenty-one slaves belonging to men in the neighborhood of Key West, taking with him their overseer, a great hue and cry was raised. The taking away of these negroes forced Major Arnold to apply to Major French, at Fort Taylor, for other negroes to take their places. The following letter from Major French illustrates the trouble which Colonel Brown's action brought to Major Arnold:

"HEADQUARTERS,

Troops Stationed at Key West, Fort Taylor,

April 20, 1861.

"MAJ. L. G. ARNOLD,

Commanding Fort Jefferson, Tortugas,

"MAJOR: In order to further the views contained in your letter received to-day, I have been with Lieutenant Morton, engineer corps, to the town of Key West, for the purpose of giving my personal guarantee that any negroes he may be able to engage for labor at your post will not be removed therefrom for any purpose whatever without the consent of their owners, and I further offered to obtain yours to the same effect

effect should they be allowed to be sent. It is not necessary for me to allude to the reason of this unless its propriety should hereafter be questioned.

"In regard to the force employed at Fort Taylor, I have not yet had time to see Captain Hunt, but fear the lateness of the season, which takes the white laborers north, and the excitement in town regarding the capture of the black force at your post, will be difficulties not readily to be overcome.

"You are correct in ascribing to me a general desire to promote the good of the service, which is, as it always has been, the uppermost thought in my action.

"I am, major, very respectfully, your obedient servant,

"WILLIAM H. FRENCH, BVT.-MAJ., U. S. ARMY,
Commanding."

The following correspondence explains itself:

"HEADQUARTERS, DEPARTMENT OF FLORIDA,
Fort Pickens, Fla., April 22, 1861.

"BVT.-MAJ. L. G. ARNOLD,

Commanding Fort Jefferson, Tortugas,

"MAJOR: At my request Captain Adams, commanding the naval forces at this place, has ordered the ship *St. Louis* to be stationed off your fort in such manner as to give you necessary aid and protection. He is also required to render you assistance in any manner that you may require, consistently with the safety of his vessel.

"I am, sir, very respectfully, your obedient servant,

"HARVEY BROWN, Colonel Commanding."

The secession of Virginia caused one of Major Arnold's lieutenants to resign his commission in the United States Army, and the following interview with that gentleman, now residing in Boston, showed Major Arnold's sagacity in handling the case. Lieut. J. Watts Robinson, of the First Artillery, came to the Tortugas in April, 1861, from Texas, where he first met Major Arnold. He said:

"I had served at Fortress Monroe in 1854-55, where I met Mrs. Arnold, but not the major, who was then in command at Fort Deynaud in Florida. I was a Virginian by birth, while my wife was Northern bred. Secession weighed heavily on my mind, and for some time after coming to Fort Jefferson I was in doubt as to the proper course to pursue. I was not sure whether I owed a greater allegiance to the United States than to the State of Virginia, which doubt was intensified by my marriage. My wife clung to the North, while my judgment was for the South. The officers at Fort Jefferson, including Major Arnold, advised me to remain in the army; but when Virginia seceded, I decided that I could not bear arms against my native State, and on May 15, 1861, handed my resignation to Major Arnold for transmission to headquarters. Arnold took the paper and said: 'You say that you cannot fight against Virginia. Would it not be well for you to consider whether

you can afford to fight against the United States? I do not think you can, and I do not want you to do so. The position of post sutler is open, and you can in all probability obtain it. Now, will that suit you?' I thought the matter over and concluded that Arnold's solution was the better one and applied for the position. Arnold convened the Council of Administration, a board of officers, which at once nominated me for post sutler. The nomination was approved by Arnold and forwarded to Washington the same day. Arnold then told me that I need not wait for a return, but to proceed North and lay in a supply of goods. I went to Boston, bought my goods, and in due time the appointment came.

"I never would have been in the position of sutler to the army but for Arnold's shrewdness and desire to keep me out of the Southern army. He made a neutral out of me as a soldier, but kept my energies on the Union side. I have long since decided that Arnold's action was for the best, and have never wavered in my respect for the man. He was a good officer—yes, a most excellent officer, and was so considered by all the officers at the post and by the higher officials with whom I have conversed. He certainly put Fort Jefferson into first-class shape, and when he left it for Fort Pickens it was impregnable. Wilson's Zouaves were considered very tough customers, but they always paid their bills to me. In fact, Arnold's discipline required all the men to pay the sutler's bill. I remained at Fort Jefferson as sutler for four years, and among all the officers who succeeded to that post, not one of them was, in my opinion, the equal of the major in professional ability. I met Arnold in Boston several times after the war, while he was suffering from the unfortunate attack of paralysis, with which he was stricken at New Orleans in 1862. But for this affliction, he would have made a great general officer."

On May 1st Major Arnold reported to Colonel Brown at Fort Pickens that all was well at Fort Jefferson, that he was still very busy with the new defenses for strengthening the fort, but that he considered himself capable of repelling any force that the rebels could bring against him. This information was by Colonel Brown, on May 2d, communicated to Colonel Townsend of the War Department.

That Arnold understood his orders concerning the new defenses on the approaches to the anchorages at Tortugas, and was proceeding to carry them out vigorously, is attested by the fact that on June 19, 1861, Brigadier-General Totten, of the engineers, addressed a communication to Lieutenant-Colonel Townsend, A. A. G., at Washington, which displayed considerable anger and showed that the spirit of the old general was aroused to the utmost. He stated that on the 15th instant he had addressed a letter to Townsend asking that Lieutenants Reese and McFarland be transferred back to Fort Jefferson, from whence they had been withdrawn by Colonel Brown. General Totten then went on to say that Colonel Brown had been exercising control over engineer property and engineer operations, which he was not authorized to exercise except

by the express authority of the highest military power, and that he had delegated a like power to Major Arnold. He charged that Major Arnold was issuing orders to the engineer officers in charge of the construction of Fort Jefferson, directing what particular work they should carry on at that fort; that he was directing all purchases that should be made; requiring the engineers to make and submit plans for Arnold's approval for the new defenses on the several keys in the harbor; requiring the hire for labor and mechanics for the new works to be submitted to him, and in every way setting aside the instruction of the Engineer Department at Washington for plans and purposes originated on the island and approved by Arnold and Brown. General Totten felt much agrieved over this and threatened to withhold his approval from all accounts necessitated by Arnold's action. Colonel Townsend answered that the expedition of Colonel Brown was organized under great secrecy and authorized under strict orders signed by the commander-in-chief, the President, and by the general-in-chief, Winfield Scott, and that these orders were not on file in his (Townsend's) department, that he had never seen the orders, and therefore could not act upon them. He ordered Lieutenants Reese and McFarland back to Jefferson as soon as Brown could spare them.

Arnold went on with his work under his explicit orders, and General Totten, although much mortified, was compelled to submit. The secret orders given to Colonel Brown authorized him to use almost dictatorial power and were not exceeded by authorizing Major Arnold to make the engineer department at Fort Jefferson entirely subordinate to his orders.

Another most excellent testimonial in the general character of Major Arnold, as well as to his work at Fort Jefferson, was given by Brig.-Gen. Alexander J. Perry, U. S. A., retired, in an interview with the writer in September, 1906. The general said:

"I was of the same regiment with Major Arnold, but he was many years my senior in age and several grades in rank. I was never in service with him, but as a member of the regiment knew him well. He always worked for the elevation of the service, and thereby impressed himself ineffaceably on his regiment. He was a skilled disciplinarian, but in no sense a martinet. The whole regiment, especially the older officers, always referred to him as a splendid officer and a clean man. He had won distinction in Mexico before I ever saw him, and distinction easily paves the way to an acquaintance. I came to know Arnold personally in the following manner: In March, 1861, I was ordered by General Scott to Washington to cover the inauguration. I was then ordered to Fort Hamilton, and on the evening of my arrival was ordered on board the *Atlantic*, a vessel of the Collins line, and soon found myself steaming south with destination unknown. Col. Harvey Brown was in command, sailing under sealed orders, and imparted no information whatever as to where we were going. We had a rough voyage, but at last reached Key West, where we remained for a few hours. Following this we headed for the Dry Tortugas, and after a long, hard pull up the harbor, landed at Fort Jefferson, where I first saw Major Arnold.

"He was then called 'General' by Colonel Brown and all the other officers, who were already well acquainted with him. I do not remember that he was called 'Little General'; it was plain 'General.'

"Arnold greeted us warmly at landing and made a fine impression on me, an impression which has never been removed. He and Brown were old friends and fellow officers, and their greeting was most affectionate. We found that Arnold knew all about our movements and what was expected of him, but we were still kept in the dark. We went over the fort in squads and found everything in fighting order. The fort was ready for any enemy and the men were in prime condition. We learned that Major Vogdes had been there sometime before and had gone on to Pickens. We stayed at Fort Jefferson two days, working all the time. All the cannon and other munitions of war that Major Arnold could spare were turned over to us, and it kept us busy loading these on the *Atlantic*. We had about eight hundred men on board, two hundred horses and a hundred head of cattle. I was more and more impressed with Arnold's soldierly qualities every day we remained on the island. At last we got under way and were told that our destination was Fort Pickens, where in a few months Arnold followed and gained additional fame."

The energy of Major Arnold, as well as his executive ability and professional attainments, was never better shown than in his movements consequent upon the receipt of the dispatch of January 4, 1861, up to and including the time when Fort Jefferson was finally placed in perfect offensive and defensive condition. To charter and have prepared a steamer fitted to carry his detachment over the long distance intervening between Fort Independence and Fort Jefferson, travel among the merchants and commission men of Boston, and purchase 750 barrels of provisions for the subsistence of his troops, load these provisions on the steamer, together with 350 tons of coal, obtain his clearance papers and ship his men within the short space of six days, one of these being Sunday, indicates an energy characteristic only of a man of great executive ability.

Brig.-Gen. Loomis L. Langdon, in an article written for the writer in September, 1905, recited the following incident as gathered by him from Arnold's men shortly after Arnold had been transferred from Fort Jefferson to Fort Pickens. He said:

"While he was at the Dry Tortugas, an incident occurred that is worth relating.

"While no shots had as yet been exchanged between the Federals and the Confederates, some of the leading rebels in Florida had gotten into the bad habit of demanding from the United States officers within the State the surrender of everything in sight. To appreciate what follows, it must be borne in mind that Fort Jefferson was an unfinished fort, garrisoned by two depleted companies, and where now the ramparts bristle with over two hundred heavy guns, there was not then a single gun of any kind mounted and ready for service. The major took in the

situation promptly and, determined to make the best preparations he could under the circumstances, began the construction from some old timber of some kind of carriages for several old flank casemates howitzers he had found lying on the parade. One afternoon, as he was anxiously supervising the working of his first carriage, an armed schooner appeared off the fort and, sending a messenger ashore, demanded the surrender of the fort to the State of Florida. To say Arnold nearly had a fit is to put it mildly. Of course, the messenger had not been allowed to enter the fort, but sent in his message by the officer of the guard. Major Arnold rushed to the embrasure nearest the sally-port and shouted out to the man, "Tell your captain I will blow his ship out of water if he is not gone from here in ten minutes. Think I will open fire anyway." Within a few minutes the schooner was blending with the horizon."

This occurred very shortly after Arnold's landing and is authority for Mr. Hetherton's statement, "That if the expedition had been one day later in landing, the fort would have been seized by authorities of the State of Florida."

General Langdon also contributes the following incident, which occurred just prior to Arnold's leaving Fort Jefferson for Pickens:

"There was another affair happened in the fort about that time that evidenced the major's readiness to assume a responsibility, a quality essential to the making of the best officers. In this battalion brought from Texas was an officer of at least sixteen years' service, but who had, I believe, never been under fire. He was not deficient in courage, but somehow dreaded having his skin punctured by vulgar lead, and had always managed to keep on some staff duty away from the firing line, preferring to remain in rear to report progress. One day an order arrived from the department commander for the battalion to proceed to Fort Pickens immediately. This order appears to have affected the aforementioned officer in a queer way. He took to his bed and summoned the surgeon. Arnold suspected the captain was malingering and directed the surgeon to re-examine him. This was done, and the surgeon reported that nothing was the matter with the captain that could prevent his doing duty. Thereupon Arnold ordered the officer to embark on the transport at once with his company. The captain refused, claiming to be ill. Thereupon the major sent a detachment of soldiers to the captain's quarters and had him placed in a blanket and, despite his alternate angry remonstrances and loud lamentations, laid on a cot on the deck of the transport and conveyed to Fort Pickens under the watchful eye of the fearless and energetic major."

Mr. Hetherton contributes the following:

"Only one company, C, of the Second Artillery, was there at the beginning. Major Arnold was in command with Lieut. Matthew Blunt next. Soon afterward two companies of the Wilson Zouaves arrived, and in a short time a company of the First Artillery from Texas. Arnold brought some heavy guns with him and obtained others from Key West.

The Zouaves were tough customers, being made up in part from the prize-fighters, bums and thugs of New York City. They were in a most pitiable plight at landing, having been three weeks on the ocean in a scow. Arnold made them take off the Zouave uniform and burn it, and supplied them with the regular uniform of the United States Army. Their officers were to report to and be governed by the officers of the Second Artillery, and I was to instruct their musicians in field music. The Zouaves were two or three times as numerous as the regulars, had never been subordinate to anybody and threatened to wipe Company C off the face of the earth. I do not know whether these threats ever came to the ear of Arnold or not, but if they did, it did not disturb his equanimity, having, in the person of Lieutenant Graham, a splendid executive officer. Certain it is that Arnold tamed these men into a body of docile and well-drilled soldiers, who came to love him because he was the only man they had ever met they could not bluff. They were sorry when he was ordered away.

"We had plenty to eat at Fort Jefferson. Fish came in in great schools, and we waded in behind them and threw them to the shore with our hands. There was a lighthouse at Loggerhead Island, where plenty of turtles were to be had. Arnold let us go there at time turtle-hunting, and we kept the mess supplied with this savory food. We frequently caught them weighing from three hundred to four hundred pounds. The major worked us very hard in getting the fort into shape, but he always issued us not more than a gill of whiskey after our fatigue. Arnold himself never fished, *except for guns*. While the men slept he was at his desk working out ways and means.

"Arnold had a high regard for a good soldier, and when he wrote the discharge of such a one he hunted up all his good points and set them out clearly so that justice might be done the man in the future. He was extremely punctilious about these things. Every man got the character he deserved—honestly and justly. He would write with his own hand 'a most excellent soldier,' or 'a most excellent soldier, but fond of rum.' He was also very fatherly to the men. He sent for bad characters, advised and lectured them in private, which caused the reform of many of the men and also made all of them love him for the interest he displayed in their welfare.

"I was transferred on the sloop of war *Richmond*, along with Major Arnold and Company C from Fort Jefferson, to Fort Pickens, where I saw less of Arnold than before. He was now Lieutenant-Colonel Brown's chief officer and was more prominently connected with the headquarters than his company assignment. In the Wilson's camp affair, after Vogdes's capture, Arnold was placed in command, and all the credit of that action belongs to him."

* * * * *

Brig.-Gen. William Montrose Graham was with Major Arnold at Fort Jefferson from March to August, 1861, and in addition to what has

already been contributed by him, has the following to say about that period:

"Major Arnold was always referred to at Fort Jefferson as 'The Little General,' although at that time he had not attained that rank. He detailed me to mount a certain character of guns and detailed Lieutenant Benson to mount another character of guns. We had six companies in the fort, two of the First Artillery, two of the Second and two of Wilson's Zouaves. The officers in command under Arnold were Lieut. Henry Benson, Capt. Bennett H. Hill, Lieut. Lewis O. Morris, Capt. Samuel K. Dawson, Lieut. Matthew Blunt and Lieut. James St. Clair Morton. Major Arnold was a most companionable man, full of jokes, and a most excellent conversationalist. With all this he was the most rigid disciplinarian I ever served under, and despite all this had the unreserved affection of every officer and man in the fort. He was an officer without a single enemy. His reprimands were given in a dignified manner without an offensive word of demonstration. His temper was always under control. His laugh was peculiar to himself and always put everybody into good humor. His general education was excellent, and he was a master of his profession. He was always careful of the interest of his soldiers and always had an eye open to their comfort. In this particular he was almost a father. I considered it an honor as well as a pleasure to serve under him.

"Arnold had to court-martial a great many of the raw recruits, but they were no better and no worse on the whole than other volunteer soldiers. I, with other lieutenants, had to drill the Zouaves, under Arnold's inspection, in order to bring them into a proper stage of efficiency. When Arnold took them they were very rough soldiers, but when he left the island they were good soldiers, not equal to the regulars by any means, but A1, first-class troops. There were incorrigibles of course, but the ratio of incorrigibility was no greater with the two companies of Zouaves than with other raw recruits.

"I remember a very amusing incident connected with these Zouaves. One man, of the Sixth New York, stole a sum of money from his captain. The man arrested him, got the money, forced a confession and sentenced him to run the gauntlet Indian fashion. Major Arnold's attention was called to the affair, but he declined to interfere, saying: 'Let them alone. They are going to punish the man, and as it is a punishment set up by themselves, it may have a good effect.' The gauntlet was formed—the two companies of New Yorkers making a double line, armed with barrel staves. The criminal was made to run through, and his comrades gave him a tremendous beating. The man afterwards made a good soldier, and no charges were ever preferred against him."

* * * * *

In August Colonel Brown made a recommendation to the War Department that inasmuch as Fort Jefferson was now completely fortified, and that it was becoming evident that the seceding States were not in

position to attack it, the services of Major Arnold were demanded at Fort Pickens. The War Department complying with this recommendation ordered Major Arnold, together with Company C of the Second Artillery, to report for duty at Fort Pickens, which he did in the month of September, 1861.

In all that has been written of these earlier operations on the Gulf, little had been said of Fort Jefferson, of the movement to fortify it or the importance of the position to the Union Cause. Much has been written concerning the action of Lieutenant Slemmer, who was in command at Fort Barrancas in January, 1861, and who in the same month transferred his command from Barrancas to Fort Pickens on Santa Rosa Island. Lieutenant Slemmer deserves the fullest credit for this act. By an agreement between the Government and the seceding States, Slemmer was permitted to hold Fort Pickens, but not to fortify it, nor was the Government to reinforce it. He made no attempt to fortify, and the Government abstained from reinforcing, except to the extent of keeping the Brooklyn near the shore loaded with men ready to land when the terms of the agreement should expire. Slemmer was merely a tenant at the will of the seceding States, which tenancy could have been terminated by them with perfect ease at any time between January 10th and April 12th.

The real movements which guaranteed the holding of Pickens were (1) the making of Fort Jefferson by Major Arnold, and (2) the position of the Brooklyn in the Gulf after February 6, 1861. Of the two movements, the making of Fort Jefferson was the more important, and was so considered by President Lincoln and General Scott. In fact, Fort Jefferson was considered more important than Pickens by these great men, and if either had to be sacrificed, Pickens, by their express order, was to go.

With Jefferson impregnable and a base of operations guaranteed, the holding of Pickens was assured, together with its corollary, the evacuation of Forts Barrancas and McRee and of Pensacola.

Much condemnatory eloquence has been wasted by political and military writers upon this agreement between the seceding States and the Government. It is certain, however, that this much-abused agreement was of far more advantage to the Union than to the seceding States.

First, it protected Slemmer in the quiet possession of Pickens from January 10th until April 12th, when Vogdes landed.

Second, this agreement gave the Government ample time to so fortify Fort Jefferson, and to so strengthen its approaches, as to make it an impregnable base of operations, not only for the operations which really saved Pickens to the North, but also for those other operations which resulted in the fall of New Orleans. General Totten, possibly the ablest engineer in the army at that time, in a report made to the War Department in March, 1861, said that against a force that meant business Fort Pickens could not hold out ten days, and advised its evacuation.

Colonel Brown, on April 17th, after his landing upon the island, was amazed at the weakness of the fort and so reported to the War Department.

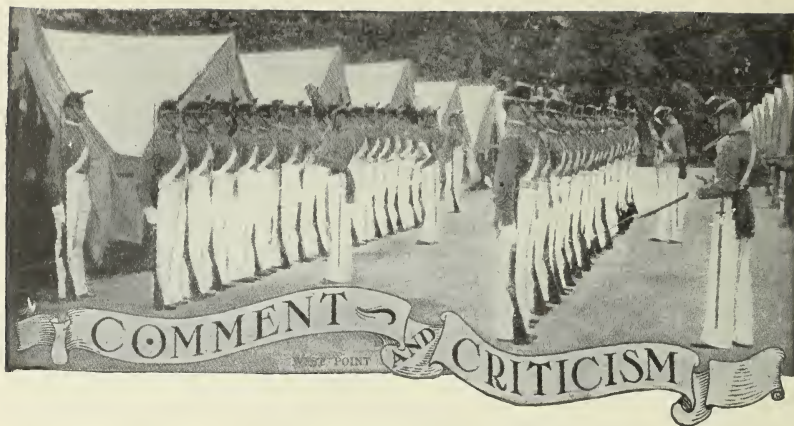
In whatever light we may view the whole matter, it has been said that the most important character in the operations on the Gulf from January, 1861, to July of the same year was Major Arnold, and that the operations in and around Fort Jefferson were more far-reaching in their character and of vastly greater importance than any writer has as yet accorded them. It is also true that President Lincoln and General Scott were the only officials who grasped their truly stupendous import.

The New Orleans *Delta* of January, 1861, called the attention of its readers to what Fort Jefferson might be and what it really was. It was a fort built to accommodate 1500 men and to mount 298 guns of the largest caliber. It commanded the entrance to the Gulf of Mexico, as every vessel passing through the Straits of Florida came in full view of its men and entirely within the range of its guns. This was what it might be. Its actual condition was summed up in the few words, "Captain Meigs is stationed there with a few laborers." It had no men and no guns. Such was the fort when Arnold landed on January 18, 1861. We have seen the despatches from the general-in-chief which hurried him thither; we have also seen the arguments presented by this same general to President Buchanan for a rapid occupation of this post and the reasons underlying its importance; we have read the written order of General Scott outlining Major Arnold's work should he find the post unoccupied; we have also noted the energy of Arnold and his single company in making Fort Jefferson proof against attack; we have noted the change of administration and the promptitude of President Lincoln in recognizing Scott's arguments concerning the paramount importance of Forts Taylor and Jefferson; we have seen a great expedition sent out under the command of Colonel Brown with sealed orders given under the greatest secrecy, signed not only by the commanding general, but by Abraham Lincoln himself, which orders were not made known to even the adjutant-general of the army, nor filed in his office; we have seen that while the primary object of the expedition was the relief of Fort Pickens, that explicit directions were given that under no circumstances were the defenses at Forts Taylor and Jefferson to be weakened, as these forts were of more importance to the Union cause than Fort Pickens; we have seen from both official and unofficial sources the armaments and munitions of war hurried to Arnold, the vigilant commander of Fort Jefferson, and the tremendous energy displayed by the man in putting all these in place; we have line upon line from both officers and men showing the intelligent zeal and confidence with which Arnold executed his trust, and a great mass of matter showing the entire confidence of the Government, from the President of the United States through all its officers down to the enlisted men, in Arnold's professional ability, not only to make this indefensible fort of January, 1861, an entirely impreg-

nable fort six months later, but also to defend it against all comers. He found it but a fort in structure and in name; he left it in September, the Gibraltar of the Gulf, bristling with more than one hundred guns, manned by more than five hundred well-disciplined troops and surrounded by numerous additional defenses. Silently and without ostentation—without a single newspaper article heralding his achievements—this true and tried soldier met every responsibility imposed upon him and carried to a successful completion the great enterprise confided to his care.

In the recommendations of the Engineer Department for the fiscal year July 1, 1861, to June 30, 1862, an appropriation of \$500,000 was asked for Fort Jefferson and its defenses, a larger recommendation by nearly 100 per cent. than was made for any other fort. Congress responded with alacrity, thus crowning with official sanction the supreme importance of Fort Jefferson as a base of operations for the various military expeditions on the Gulf. When this appropriation was made Fort Jefferson was already a palladium of strength, irreducible by any force the enemy should bring against it—and the man who brought it into this condition of efficiency was Maj. Lewis G. Arnold, who may without any impropriety be styled "The Maker of Fort Jefferson."





"The Detail System."

Lieut.-Col. W. D. Beach, General Staff Corps.

"Regimental Commander" in the JOURNAL MILITARY SERVICE INSTITUTION of March and April, 1910, in an article under the above caption gives various reasons why the abolition of the detail system except for the lowest grades in the staff departments would be of advantage to both the line and staff.

Although classed as "one of the experiments which we have been trying for the past eight years," it seems now to have passed beyond the experimental stage and to have, at least in peace, proved its undoubted value to both the line and staff.

There is much to be said on both sides of the question, but the reasons against a change seem to the undersigned so conclusive that without apology he will cite some of them.

1. The old-time system of permanent appointments to the Staff Departments failed in that there was no way to judge beforehand other than by the applicant's recommendations whether or not he would prove satisfactory; the present system whereby a number of line officers are "tried out" for four years or less furnishes an almost infallible guide as to future details in the higher grades.

2. The present system furnishes a reserve of experienced officers for detail in time of war with the staff corps and departments in the higher grades instead of being restricted as in the past to the permanent commissioned personnel or to inexperienced civilians.

3. The necessity mentioned of having men of ripe experience for inspection of clothing, building construction, etc., is entirely feasible under present conditions, for all details above the grade of major may be continuous under the provisions of the Act of February 2, 1901, if so desired, and no detailed officer of any grade need necessarily be returned to the line for duty for more than two years at a time.

4. The fear that on the outbreak of a war the detailed officers would seek relief and join their commands has some reason in view of what

has occurred in 1898 when appointments were permanent, but in view of the fact that a detailed officer's place has been filled and that he has no command to which to return until a vacancy is made for him by someone else being detailed, it is not believed that the desertions would be serious, especially if opposed by the bureau chiefs. On the other hand, there would be many other trained officers available for detail if the pressure for the relief of individuals should be too great to successfully combat.

5. The last and not the least important reason for continuing the detail system is the necessity for stimulating line promotion which, under this most excellent system now in force, is in a measure being accomplished. Should line details be restricted to captains and lieutenants, the ratio of the total number of officers in these grades to the total number in the arm would be increased and promotions to the grade of field officer made slower than at present and much slower than under the permanent system previous to the Act of February 2, 1901, because of the greatly increased number of line captains and lieutenants in proportion to field officers.

This disparity between line and staff in respect to promotion was in the past the main reason for the scramble for each staff vacancy and not, in the majority of cases, the fact that the candidate was particularly fitted for the position.

As shown by the last Army List and Directory, the staff includes the following line officers whose details thereto have made vacancies. In the case of the Ordnance Department, the detailed officers are given one additional grade:

	Colonel	Lt.-Col.	Major	Captain	1st Lieut.	2d Lieut.	Remarks
Adj. Gen. Dept.....	..	4	10	..	..	..
Inspector General's Department.....	1	4	9	..	..	..
Quartermaster's Department.....	..	..	..	47	..	..
Subsistence Dept.....	..	..	..	14	..	..
Pay Department.....	..	..	6	25	..	..
Ordnance Department.....	..	..	..	2	23	13	Line grade
Signal Department.....	..	..	..	6	18	..	
Total.....	1	8	25	94	41	13	

The effect of the system even in its present incomplete state is to add to the line 128 officers above the grade of lieutenant and 54 below the grade of captain, thus giving a very material stimulus to promotion which will be increased in the higher grades and correspondingly in the lower as time goes on. The ultimate effect of the proposed scheme of detailing only to the grade of captain and lieutenant would be to load the line of the army up with 184 additional officers below the field grade and none above; the junior captain of infantry, for example, under the "permanent" system for the higher grades only, in the staff corps, would find himself with about 70 detailed captains of

his arm ranking him and with no additional field officers to relieve the congestion. As regards his majority, he would be 70 files worse off than if the staff were permanent in all grades.

Looking at the proposition from all points of view, let us hope that the law will remain as it is. The staff corps, it can be safely asserted, have never been on as high a plane of efficiency as they are now, and some of the credit must be due to the 182 detailed officers. Let the good work go on.

"Education and National Defense." *

PRESIDENT
BVT. MAJ. GEN. A. S. WEBB (LATE), U. S. A.
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SECRETARY AND EDITOR
BRIG. GEN. T. F. ROSENBOUGH, U. S. A.
TREASURER
COL. W. B. PATTEN, U. S. A.

THE MILITARY SERVICE INSTITUTION
OF THE UNITED STATES

GOVERNOR'S ISLAND, N. Y.

COMMITTEE ON EDUCATION
BVT. MAJ. GEN. A. S. WEBB (LATE), U. S. A.
BRIG. GEN. G. W. WINGATE (LATE), N. G. N. Y.
BRIG. GEN. T. F. ROSENBOUGH, U. S. A.

May 1, 1910.

Dear Sir:-

The Military Service Institution of the United States (established in 1878) is an organization composed of officers of the Army (active and retired) and of the National Guard or Organized Militia of the different states, who are interested in the advancement of military training in the country. It annually offers gold and silver medals for essays on subjects, which are of value to soldiers and to the public service. These are published in its bi-monthly Journal.

In 1909 it was deemed by military men to be of great importance to the National Defense to devise some method by which all citizens, and particularly the youth of the country, should be given as much military training and education as possible, and the Institution offered its prizes for the best essays on the following subject: "What Military Training and Education should be required in Educational Institutions of all Grades and What Legal Exaction of Military Service on the Part of the Government is Wise and Compatible with our Institutions?" The essays for which prizes were awarded present many novel and important ideas.

The undersigned have been appointed a committee of the Executive Council of the Institution to obtain the opinions of leading educators as to the practicability of the views expressed by the essayists.

We, therefore, transmit (under separate cover) a pamphlet containing these essays and would be much obliged if you would favor our committee with your views in respect to any of the matters which are treated, particularly in the essay of Lieutenant Mayes, whose plan for Government aid in the cases of young men unable to afford the expense of a college education merits particular consideration.

Your reply may be addressed to "The Secretary, Military Service Institution, Governor's Island, N. Y."

Yours sincerely,

Alex. S. Webb

Gen. G. W. Wingate

T. F. Rosenbough

Committee.

*Letters from educators received in response to the Committee's Circular republished above follow.—[Ed.]

President Arthur T. Hadley, Yale University.

Your letter comes just as I am leaving for the West in order to take part in the semi-centennial anniversary of the University of California. I am therefore unable to study the essays on national defense, and particularly that of Lieutenant Mayes, in the way that they deserve. I can only say provisionally that if an attempt was made by the Government to put a plan of the sort outlined into effect, I should be glad to do everything that I could to co-operate with the project, both by way of suggestions regarding the form of the bill when it was in the hands of Congress and by recommending arrangements to the Yale Corporation for the purpose of carrying out the provisions.

NEW HAVEN, CONN., April 30, 1910.

President J. G. Schurman, Cornell University.

I am in receipt of your circular letter of May 1st sent out by the Committee on Education of The Military Service Institution of the United States, and also of the pamphlet entitled, "Education and National Defense," containing the essays to which prizes have been awarded by the Committee. The Committee asks for my views, particularly on the essay of Lieutenant Mayes, which received the award of the gold medal.

I have read all the essays in the pamphlet, and have given special consideration to the essay of Lieutenant Mayes.

I find myself entirely in sympathy with what I may call the political and military background out of which Lieutenant Mayes develops his plan of military education and defense. He seems to me to have correctly estimated the conditions with which any plan of reform must reckon.

Coming to the particular plan which Lieutenant Mayes has sketched, I may say that I approach it with sympathy, as I have for many years entertained the conviction that the most economical and most effective way of improving military training and of increasing the military defense of the country was in connection with the existing universities.

In Lieutenant Mayes' scheme, however, there are certain features which would not, I think, from the point of view of the universities be feasible. In the first place, he proposes to increase the attendance at our universities by some 20,000 students, but he does not provide teachers and facilities to furnish instruction. It is true that he would have the Government vote \$100 a year to each university for each student it received, but although \$100 a year is the minimum charge for tuition in our privately endowed universities, it is not more than one-third or one-fourth of what it costs to educate a student. I conceive, therefore, that if this plan is to commend itself to our universities the Government would need to make appropriations to enable them to provide teachers and facilities for the military students.

A similar criticism must be made on the proposal to have the uni-

versities furnish the Government free of charge barracks, dining-halls, lecture rooms and storerooms. All these, as well as an armory for drill purposes, should be furnished by the Government. I mean that no university has the means which it could use for the purchase and maintenance of these objects needed by the Government.

There is another point still more fundamental which has not been sufficiently considered by Lieutenant Mayes. He assumes that because there are impecunious students who desire and cannot get a higher education, they would jump at an education furnished them by the Government under the conditions and surroundings of a strict military régime. I doubt whether this supposition is correct. Lieutenant Mayes recognizes the existing indifference to or prejudice against military training in the mind of the American people. And I do not think he has overstated it. That sentiment, however, would operate in deterring young men from taking a higher education under the military conditions imposed.

Lieutenant Mayes has not considered the effect of this scheme on our universities. The object of the university is to impart knowledge and to increase knowledge by research. The training of soldiers, however important from the point of view of the republic, is an entirely different object. It seems to me inevitable that there should be a conflict between these ends—a conflict in which the purpose of the university would suffer detriment if not defeat. The proposed course of study outlined by Lieutenant Mayes is probably not such a course of study as many students would want to take; nor, in my judgment, would it be the most desirable course for them. Here at Cornell University, and the same is true of most of the other great universities of the country, our undergraduates pursue a variety of courses—some in liberal arts and sciences leading to the A. B. degree, others in applied science leading to a degree in engineering, and others in agriculture, veterinary medicine, etc., leading to appropriate degrees. To few of them would Lieutenant Mayes' curriculum be adapted.

I am expressing freely and frankly the impressions which Lieutenant Mayes' article have made upon me after careful reading and consideration. I want it understood, however, that I sympathize with the object he desires to accomplish, and to a considerable degree also with the method which he proposes for its accomplishment. I believe, however, that his scheme will not work unless the military demands are somewhat relaxed, and larger account taken of the ideal and work of the university and also of the purposes and desires of the students. I have in my own mind the outlines of a scheme which I think would meet the conditions. At any rate, I believe it could be reconciled with the object and purpose of the university, and would go a long way, if not the whole way, towards improving military education in the country and increasing the national defense. It is not necessary, however, that I should here define my own scheme. It is enough to have given you the im-

pressions I have received from the perusal of Lieutenant Mayes' plan; and if I have singled out points to which I take exception for the purpose of making my communication of some value to you, I should do injustice to my own feelings if I did not repeat that I am in perfect sympathy with the object Lieutenant Mayes has in mind, and that I have formed from an examination of his essay a high opinion of his ability and originality as well as of the comprehensiveness and sobriety of his judgment.

ITHACA, NEW YORK, May 5, 1910.

President George E. MacLean, State University of Iowa.

Thanks for the copy of "Education and National Defense." The essay is a comprehensive and valuable one. I thoroughly believe that State universities, as counter-distinguished from the college of agriculture, are under a moral, if not a legal, obligation to have instruction in military science and tactics. This university has such a department.

I find myself largely in sympathy with many of the positions taken in the essay and in the honorable mention essay.

On page 220 Major Ellis in saying that the act of 1862 paved the way for the State universities overlooks the fact that the State universities were established practically under the inspiration of the ordinance of 1787, and the act of 1862 only gave a new impetus to the historic movement. I am on general principles of the opinion that the United States should only give aid to public institutions and not to private ones.

IOWA CITY, IOWA, May 12, 1910.

President S. E. Mezes, The University of Texas.

I have found the essays on "What Military Training and Education Should be Required in Educational Institutions of all Grades, and what Legal Exaction of Military Service on the Part of the Government is Wise and Compatible with our Institution?" very interesting, especially the one by Lieutenant Mayes. The latter's suggestion of the proper training to be offered in schools is bracing and definite, and his plan a "Reserved Cadet Corps" to assist worthy but poor young men to secure an education has, I should say, some excellent points in its favor. If such a provision should be made I should be glad to have a company stationed at the University of Texas.

AUSTIN, TEXAS, May 11, 1910.

President F. S. Luther, Trinity College.

I beg to acknowledge with sincere thanks the receipt of your favor of May 1st, followed within a few days by the pamphlet including the essays with reference to the military training of young men. I have read the essays with great care and I earnestly wish that in some way

our young boys of college age, not restricting my desires, however, to college students, might receive some thorough military training—every one of them. Its educational effect is most salutary and the value to the nation beyond computation. I am bound to say, however, that I should not expect any very great results to follow from the adoption of the military feature in our college training. There are not enough young men there in the first place, and there are other reasons which I can see. The problem is a peculiar one in my own mind, because I have no theory as to what ought to be done. I wish I had one, even a bad one, but I haven't. If I ever have a chance to help in establishing some plan for carrying out the purposes which military men and many civilians have at heart I shall be glad to do so.

HARTFORD, CONN., May 9, 1910.

President Frederick W. Hamilton, Tufts College.

I am in receipt of your letter of May 1st accompanying the very interesting collection of essays on military training and education. I was very much interested in several of the essays, particularly the one of Lieutenant Mayes. I regret to say, however, that it seems to me to be quite beyond the bounds of possibilities concerned as a practical scheme for the introduction of more military education into our education institutions. American educational traditions and American public sentiment are such that I do not believe it possible to introduce any considerable amount of military training into our educational institutions.

TUFTS COLLEGE, MASS., May 27, 1910.

Professor Lincoln R. Gibbs, University of Pittsburg.

I have read with care the essay of Lieutenant Mayes on "Education and National Defense" and have looked through the other prize essays with a view to getting their suggestions concerning institutions of university and college grade.

The salient items recommended by Lieutenant Mayes are as follows:

1. The establishment of a Reserve Cadet Corps of the Army, the members of which shall be college students. These students become eligible, after graduation, for commissions in the militia. Their military instruction is designed to fit candidates for the commission of second lieutenant of artillery. The course of study outlined includes a total of about eighteen year-hours of work in military subjects, and those closely allied, in the four years of the college course. The plan contemplates a corps numbering 20,000, and Lieutenant Mayes estimates that his proposed law would provide instruction for 5000 men every year.

2. The colleges that give the instruction are to be selected by the President of the United States. To each of them an army officer is to

be assigned as professor of military science, who will have all the privileges and responsibilities of other professors, and who may not be called upon by the institution for other instruction than military, or such as is approved by the Secretary of War. The colleges will receive \$100 a year for the tuition of each cadet.

3. The colleges desiring to engage in the instruction of cadets must file a bond with the Secretary of War, binding the institution to give the course of instruction prescribed by the Secretary of War, to provide, free of charge, suitable barracks, dining halls, lecture rooms and storerooms, together with a sufficient number of competent instructors. Army inspection is provided for determining whether these conditions are properly met.

4. Young men are to be attracted by offer of the pay of a private in the infantry branch of the Regular Army; cadet officers shall receive the pay of sergeants in the infantry. Tuition charges of \$100 a year are to be deducted from the pay.

5. Cadets are enlisted in the Regular Army; are subject to emergency calls in case of war or insurrection; are subject to calls for vacation drills and encampments; are under the discipline of the army as well as that of the college, so that they may be discharged without honor from the army if they fail in their scholastic work.

The scheme is, in effect, the establishment of military scholarships in civil colleges. Its main design is that of providing officers competent to take charge of volunteer troops in the event of war, and of fostering a military and patriotic spirit among the youth of the colleges. It differs from the present practice in the fact that it provides not only drill and a year of instruction in military science, but also a complete course in the latter, serious enough to be of professional value, and at the same time a good preparation for the consular service and for advanced university work. In my opinion the plan has many things to commend it:

1. It would improve the moral tone of college life by presenting to students a daily object lesson in the claims of the State. At present students are too much inclined to regard themselves as the elect recipients of special privileges, without responsibility to others or to society.

2. The drills and exercises would naturally interest non-military students and would doubtless lead to the organization of similar discipline for them. This would be a great advantage as regards health and physical culture. At present most college students take their exercise by proxy, as spectators at athletic games.

3. The discipline of colleges would profit by an infusion of military rigor.

4. The college's responsibility to the Secretary of War would be a stimulus to its own corps of instructors.

5. In general, the connection proposed between the colleges and the State would elevate the whole matter of education, in the minds of teach-

ers, parents and students, by bringing its non-selfish side into a clear light.

On the other hand, I see some incidental objections to the proposal. These, in my opinion, do not touch the essence of the matter; but they need amendment before the project is approved by college authorities:

1. The tuition received by the college is too small. It makes the cadets to too great an extent pensioners on the bounty of private donors or public taxation (State). The cadet corps would naturally include many students who would have attended the college in any case.

2. There is no provision for suitable barracks, etc. That is made a charge upon the colleges, without compensation. Trustees would be without authority to use the funds of the college for the erection and maintenance of these buildings, unless the project assured them a better financial return than it seems to do.

3. The course of study proposed is wholly required. This conflicts sharply with the educational convictions of the majority of college teachers, who, I believe, desire some proportion of free election by students. PITTSBURG, PA.

Major Charles E. Lydecker (late) N. G. N. Y.

As a teacher in various capacities, as college instructor and military teacher and commander, having long shared the sentiments of our essayists, I comply with your request to give my views.

No subject is more timely than that discussed in these prize essays on the addition of military exercises and themes to the courses of education for the younger generation.

In planning for a comprehensive extension of the education of youth in military subjects and their training as soldiers, it is well to consider that educational institutions in the United States comprise schools, high schools (manual, business and academic), colleges, universities, technical and special schools of science, commerce and art, professional schools of law, theology and medicine, forestry, agriculture and pedagogy, as well as the training colleges for war officers and the War College.

Probably the soldier essayist is prone to take too advanced a position in respect of the importance of universal military training, and in judging of these essays, it is apparent that the second essayist is more practical and reasonable in his suggestions than the first.

The extraordinary broadening of the field of education reflects perfectly the development of fields of human activity and the arts of peace are well in advance of the arts of war, wide and deep as the labors of those connected with the army and navy have gone.

As this nation extends its potent influence over the peoples of the world, the extension of the studies of the military art will continue, and above all in this expansion, the HEART of the soldier must be created in

youth to obtain the material to do the nation's mission. From time immemorial the Educational systems of nations have been such as made the kind of men and women *which the nation required for its task*. The educational system of Greece was fitly called Martial.

This country will not now adopt a martial system, but it will undoubtedly require the inculcation of the elements of a soldier in the children of the land. This means discipline and patriotism, self-reliance and courage, strength, agility and knowledge.

It is probable that military training of an elementary character can be engrafted upon only our schools and high schools, and that the science of military work can be engrafted upon the courses of study in colleges, technical, professional and special schools only theoretically.

I therefore regard so ambitious and difficult a plan as the conversion of our colleges into semi-military institutions as unwise and impracticable. The colleges would lose the calm and studious atmosphere so valuable and necessary for the nurture and growth of thoughtful minds.

The essence of military training is action; the essence of the training of the Academic Shades is intellectual breadth and strength. The confusion of these purposes in developing from youth to manhood would be a grievous error. In childhood and early youth, the physical training and the morale of a soldier's performance of duty may well be incorporated with the preparatory studies and the humanities now taught, and the nation greatly needs to be educated up to the admirable suggestions of our authors. Students of more advanced institutions than schools and high schools should have their early military training supplemented by thorough theoretical study of the chief topics of the technique and matériel of War, to as great an extent as those institutions deal with individuals who could serve their country's cause at any moment. Institutes of Technology, for instance, would approach the fields of ordnance and gunnery, forts and fortifications, armament and naval construction, as well as machinery. Schools of Chemistry similarly the field of explosives, stores and preservatives. Even Schools of Theology could approach the field of logistics, strategy and courts martial.

When young men have been trained to military discipline and later have been patriotically taught of the duties of a soldierly career, they should become members of the organized militia and serve their country.

These essays advocate incorporating actual military service in College and University courses generally, the second rather more tentatively than the first and third. I doubt the wisdom of that effort, and think that theoretical military training supplementing a period of physical and mental military training, including marksmanship, up to the age of eighteen, leading up to a system of "organized militia," which shall organize the militia and not stop in creating a reserve of 100,000 men, is the more practical solution for our present day people and life in the United States.

Commandant Dept. Military Science and Tactics, Univ. Wisconsin.
(Captain R. McCoy, U. S. A.)

Lieutenant Mayes, in his essay on Military Training, states what we all acknowledge to be true, that the spreading of military knowledge must be done without cheapening the dignity of the military profession. The weight of opinion will probably be found against him, however, in his belief that the excellent military training now being given to thousands of boys of high school age in our military preparatory schools does detract from the dignity of the profession of arms. That "the majority of the people think to-day that a boy who graduates from a military academy of high school grades learns about all there is to military science" may be seriously questioned. Certainly those who understand the subject at all do not make such an error. Granting that the majority of people take this view, it may still be maintained that the good accomplished by these preparatory schools largely outbalances any possible evil.

In the Thirty-fifth Michigan Infantry, a "second call" volunteer regiment in 1898, there were nine commissioned officers whose only military experience was a course at the old Michigan Military Academy, now, unfortunately, out of existence. This regiment was encamped at Captain Meade, Pa., and at Camp McKenzie, Ga., in 1898 and 1899, and saw no active service. The attention of its officers was directed almost entirely to three essentials, discipline, sanitation and drill. The nine officers who were graduates of the Michigan Military Academy certainly made an excellent showing as compared with the others, though neither they, nor any others in the regiment, thought for a moment that they knew "all there was to military science." This regiment is cited as an example which came directly under the writer's notice. As a matter of fact, the volunteer regiments of '98 were exceptional in which advantage was not taken of the military knowledge acquired by some of their officers in military preparatory schools.

In the regiment cited, five of the officers with military school training later became officers of the Regular Army, which would tend to show that such training does fit a man to pass the examination required of appointees to the army from civil life. It is agreed, however, that preparatory school training is given too much importance under our present regulations, as compared with that of universities and colleges.

As for the plan proposed by Lieutenant Mayes for a college reserve corps, while undoubtedly good in theory, it is believed to be impracticable for various reasons. Our universities and colleges of the first class can probably never be induced to build barracks and assist in maintaining organizations of such a decidedly military nature as those proposed. Then, too, it is doubtful whether a sufficient number of men would be found to enlist for such a course, even though it should be at the expense of the Government. The freedom of university and college men

is proverbial, and it is not believed that a purely military body of students could exist alongside a larger body having the usual freedom. Moreover, it would probably be impossible to induce the United States Government to undertake the proposed system of education, at least until means have been devised for utilizing in some measure the products of the existing system. In spite of the many things that may truthfully be said against it, this present system contains very much that is good. Our principal difficulty is that no way exists by which its products may be utilized.

First Lieut. G. A. Taylor, C. A. C., U. S. A.*

College men as a class will not take military duty seriously. When required to drill, some of them develop hitherto unexpressed Quaker tendencies. One man, whom I knew, suddenly found that he was suffering from acute neurasthenia. College men will go to their deaths with the same nonchalant spirit with which they would enter a canerush, but will not prepare themselves for military service until the crisis is imminent. It is a national fault, for which we must pay some day. Theodore Roosevelt, "Ham" Fish, "Jack" Greenway, "Bob" Wrenn and other college men went to Cuba, and "made good," with that same joy of the conflict with which they would have "bucked a line," but Colonel Roosevelt was lieutenant colonel at first, and deferred to his more experienced friend, Colonel Leonard Wood. "Ham" Fish gave all that a man can give, but some obscure, dark-hued sergeant in the Tenth Cavalry may have shot even straighter and sold his life even more dearly before they "got him."

Here in Denver they have recently organized a National Guard company of college men, but it took more time than it should have. Too many college men prefer to "muddle with books, an' pictures, an' china, an' etchin's, an' fans." * * * Our college education as a whole is tending to emasculate the cardinal virtues upon which this republic has been builded and maintained. What percentage of undergraduates can shoot and ride?

The other evening at our University Club here in Denver, my friend, the German consul, spoke before the club on the subject of German university life, with its corps, and duels and many-hued caps. He remarked incidentally, in a matter of fact manner, that during his university life he had served about fourteen months with the colors. Compulsory military service is, of course, contrary to our institutions, but that it should have to be compulsory should not be necessary. I have too much faith in American manhood and sound sense. The time will come, and is coming, when men will voluntarily train themselves as soldiers. Read of what they are doing along military lines in Aus-

* Extracts from Lieut. Taylor's paper "Brown and Militarism" in *Brown Alumni Monthly*.

tralia. Those men covered themselves with glory in South Africa, and when they died it was from bullets, not disease.

Some few years ago I came back to Brown and went into Sayles Hall. Major "Billy" Brown and all the rest of the men in uniform, whose portraits in my day hung in honored places, were as near the back of the hall as they could be gotten, without being actually ejected—and "Billy" Brown, '62, killed at Petersburg—God forgive the man who moved his picture, he knew not what he did. But the old Civil War men are gone, all but Professor Manatt—unless my memory fails me, there is a bit of bronze on the lapel of his coat.

I feel very strongly upon this subject, but the space is limited. I would advocate the restoration of the department of military science at Brown, and that the course include infantry drill, close and extended order; small arms practice on the State rifle range; military and international law; army regulations, including a course in the simpler official papers and military correspondence; field-service regulations, including such field exercises as are practicable; military hygiene and the handling of the ration. These last two subjects are very important. A volunteer company will eat its ten days' rations in three, and its members will die of disease, while a regular company is getting fat on the same food, and having a minimum number on the sick-report. This contrast is not quite so marked now as it was ten years ago, however. * * *





THE ROLE OF CAVALRY IN WAR.

(*The United Service Gazette.*)

THE Cavalry Maneuvers which have just taken place show that Gen. Sir John French, who was the controlling spirit of the maneuvers, has very clear and decided views as to rôle of cavalry in modern warfare, and certainly his methods in South Africa made it manifest to the whole world that in him Britain possesses a cavalry leader of great versatility and force of character. Some distinguished foreign soldiers hold that what is termed the "cavalry spirit" is opposed to the idea of dismounted action. They maintain that cavalry disdain to dismount, and see in riding an end, not a means; and that the Russo-Japanese campaign teaches that we must render our cavalry less devoted to "maneuvers" and to "tournaments" in order to enable them to take part in modern fighting. In fact, that the time has come when methods of warfare must be changed, and that cavalry must defeat the enemy by dismounted action entirely. To the uninitiated, "dismounted action" means that the cavalry soldier is made, in fact, a specialized infantry soldier put on a horse for rapid mobility, and that leaving his horse he takes to his rifle at the psychological moment.

General French, in a measure, holds the same doctrine, but at the same time insists that not only must the "cavalry spirit" still be encouraged to the full, but it must be brought to bear so as to assist the success of dismounted work. His profession of faith amounts to this, that the greater the mounted man is imbued with the cavalry spirit, the readier he will be to determine and seize the opportune moment when dismounted action may be most effectively employed; and it was this doctrine that he emphasized during the recent cavalry training. He believes that cavalry cannot perform its rôle in action until the enemy's cavalry has been severely punished, if not defeated, and that for this reason it is essential that the cavalryman should be an expert shot. But while encouraging the attainment of rifle efficiency, he is strong in the contention that this can be brought no nearer

of attainment by ignoring the horse, the sword and the lance. That cavalry did not prove such an important factor in the Russo-Japanese War was due to the fact that in the case of the Japanese they were badly mounted, their riding was far from being what it ought to have been, they were weak in numbers, and they consequently could only fulfil the rôle of "divisional cavalry"—the cavalry attached to the division, not a separate fighting unit as a cavalry division or a cavalry brigade would be. In the case of the Russians, their cavalry had been trained on lines quite opposed to the teachings of General French, and consequently opportunities which came to them at critical moments, and which might have been used by them at considerable advantage to themselves, were neglected and allowed to pass, simply because the Russian cavalry had not been trained to fulfil its proper mission in the field.

The first phase of the cavalry maneuvers was usefully employed in carrying out a great reconnaissance, the result of which proved that the art of concealment is found to be more successful than that of penetration behind the screen of an army. Information regarding the opposing forces appeared to be indefinite and to be gathered too slowly to be of adequate service; and this was, perhaps, due to the fact that the various means of communication provided and available, were insufficient and not correspondingly adequate to the importance of the work to be carried out. It is a matter of regret that this should have proved so, for reconnaissance duties have vastly increased in importance during the last few years, and unless something substantial is achieved in the way of collecting useful information by such a reconnaissance, an army becomes absolutely handicapped by being deprived of the essentials which make for success in the field. Naturally we may expect some strong criticisms from Sir John French on this want of success in the reconnoitering features of the training, for it is not so long since he laid down the dictum that the rôle of cavalry is summed up in three words—reconnaissance, deception and support. The idea of surprising the enemy was, he pointed out, the very spirit and life of Frederick the Great's instructions; but to surprise they must know how to deceive. It is General French's belief that an enormous field of useful labor is open to leaders of mounted troops in this work of deception and consequent surprise, but a most intimate knowledge of battle-field tactics is essential, and he therefore earnestly commends this study to cavalry leaders. Given this knowledge, many kinds of ruses could be studied and thought out which only require constant practice in peace time to make them effectual in war. The rifle now in the cavalryman's hands would, he believes, make the support it could render of infinitely greater value than formerly, and, acting on this belief, we may assume that Sir John's aim is to make the cavalryman reconcile the true cavalry spirit with the expert use of the rifle as a dismounted combatant.

AUSTRIA-HUNGARY—DETACHMENTS OF INFANTRY TELEPHONE TROOPS.*

TRANSLATED BY ROBERT COKER, SECOND LIEUT., TWELFTH INFANTRY.

ACCORDING to the *New Free Press*, each corps of infantry is to be allowed a section of telephone troops. Until the present time only regiments of cavalry and the larger units, from the division up, have had at their disposition sections of telephone troops, and as for the infantry the only means it has had at its disposition for transmission of orders and messages have been couriers, cyclists, signal operators and orderlies.

On account of the new conditions of modern warfare the telephone has acquired great importance as a means of communication for long distances. It is quicker than the telegraph and does not require, like the latter, special knowledge and thorough understanding of alphabetical signs.

The present signal patrols form the nucleus of these new detachments of telephone troops. Each regiment will have at its disposition twelve men, thoroughly versed in optical signaling, and from among these four will be trained in the use of the telephone.

Equipment will comprise microphones and light wire which will be carried by the soldier without perceptible addition to the weight of the load. The creation of these detachments of infantry telephone troops will allow the commander-in-chief to keep in constant personal touch with his various bodies of troops, both during a battle and during the nightly halts, and the handling of troops will thereby be greatly simplified.

THE NEW CAVALRY CARBINE (GERMANY).†

DESCRIPTION OF ARM, CARTRIDGES AND BAYONET AND METHOD OF CARRYING THE CARBINE AND CARTRIDGES.

THE new cavalry carbine. The adoption of the 98 carbine can be regarded as a matter decided upon. The new carbine is 15 cm. (about 6 in.) longer than the one in use, and has an arrangement for the fixing of a side-arm. In weight it is $\frac{1}{2}$ kg. (1.10 lbs.) heavier; its ammunition is for each 5 cartridges nearly 30 gr. (about 1 oz.) lighter, which by 60 cartridges almost makes up for the overweight of the weapon. The sight ranges from 300-2000 meters in contrast to the 1200 meters of the old carbine. The efficiency of shooting can be accepted as being equal to that of the rifle 98, since interior and exterior arrangements correspond to the rifle which is only 15 cm. (6 in.) longer.

The short side-arm 71/84 will be very likely used owing to the large stock on hand. It has proved itself to be good in the engagements in southwest Africa. There are yet two questions of equipment to be solved: the disposition of the cartridges and the mode of carrying the carbine. The present cartridge-pouch of the cavalry with its useless bandolier cannot be regarded as serviceable in war. Very

*From *La France Militaire*, No. 7644, May 25, 1909.†Translated by E. A. from *Neue Militärische Blätter*, Germany, p. 124, May 3, 1909.

likely the single cartridge packages (of 5 cartridges each) will be carried in small flat pockets in a belt or on the chest. In this way the carbine can be more easily thrown across the shoulders—a circumstance which by a quick mounting on horse after a foot-engagement is of importance. Whether it is at all possible to fasten the carbine in a downward position is to be questioned on account of its greater length. In taking obstacles it would strike against them, and under circumstances bring the horse to a fall, or wrench itself off. The alternative between sabre or side-arm will have to be decided before long. Both weapons are impossible for the cavalryman.

One can imagine the lance as the only small arm of the trooper on horseback, the side-arm fixed on the new carbine in foot-engagements; and in peace as well as in war carbines and side-arms would be serviceable for guard and patrol duty.

THE MEXICAN AUTOMATIC RIFLE.

A. H. C. PHILLPOTTS, COLONEL LATE R. A.

(*The Journal Royal Artillery.*)

GENERAL PORFIRIO DIAZ, President of the Mexican Republic, wishing to arm his infantry with an automatic rifle, gave General Mondragon instructions in 1891 to select a weapon of this nature.

After lengthy and detailed study together with exhaustive experiments they eventually selected the rifle described below which has now become the regulation Mexican weapon.

The manufacture of the weapon was commenced in 1908 and Mexico is thus the first nation to adopt an automatic rifle for its infantry.

The new weapon can be used either as a repeating rifle or as a single loader.

A commander can thus regulate at will the intensity of fire and can order firing shot by shot, or continuously.

The magazine containing ten rounds is placed as usual under the rifle in front of the trigger guard.

There is a cylinder under the barrel, into the forward end of which the powder gas is admitted through a very small hole in the barrel; this gives the so-called automatic power to the rifle by means of a series of pistons and levers.

The expansive power of the gas only acts for a very short time; it stops as soon as the bullet has left the rifle.

By a very simple turn of a screw the automatic loading is stopped by the force of the gas being expended into the open.

No other movement is necessary to turn the weapon into a single-loader.

The rifle weighs only nine pounds. It takes a cartridge of .276 of an inch, giving a muzzle velocity of 2236 feet, and can attain a rapidity of fire of sixty rounds per minute, while at the same time maintaining a most satisfactory accuracy of fire.

There is no fear of the tube through which the gas passes getting fouled as the piston at each movement cleans it thoroughly.

The weapon is itself very strong and such lengthened fire has been kept up with it that the barrel expanded .157 of an inch and the wooden

stock began to smoulder, without the mechanism going out of order for a moment.

By the adoption of the Mondragon rifle, Mexico finds itself in the happy position of being the first power to adopt into the service an automatic rifle for its army. There is here no question of a heavy, rapid-firing rifle handed over to a few specially chosen and specially trained men, like the quick-firing Madsen (Schouboe) rifle lately adopted by Denmark, Russia, and some others, but a weapon of normal weight meant to take the place of the existing armament.

The scheme adopted by Mexico is also specially interesting, as it renders the transition from one armament to another as simple as possible and reduces to a minimum the cost of the change.

Up till now the Mexican Army has been armed with a Mauser rifle of .276 of an inch, commonly known as the Spanish rifle (1). This arm, one of the best at present in any service, fires a cartridge which imparts a muzzle velocity to the bullet of 2235 feet.

This being the case, General Mondragon considered it unnecessary to attempt to increase the ballistic properties of the rifle and he decided to retain the present cartridge.

Having thus kept his demands within narrow limits, he has been able to manufacture a rifle working satisfactorily and to avoid in the Mexican army the difficulties usually inseparable from a change in armament.

There is, therefore, no hindrance to using at the same time in the same unit an automatic Mondragon rifle side by side with the present Mauser.

The alteration in armament can thus be made with ease, the supply being made rapidly or slowly according to the funds available in the hands of the War Minister.

Besides, by at once putting a certain number into the hands of the troops, any slight defects which practical experience may bring to light can be discovered and quickly rectified without the troops suffering from a heterogeneous armament.

Further, the cartridge previously in the service being retained, the expense consequent on a change of armament is limited to the cost price of the new arms, which comes to a little less than 100 francs a rifle (80).

If a new cartridge had been adopted and only 1000 rounds per rifle had been provided, it would have cost the Mexican Government double the amount.

As a matter of fact the adoption of an automatic rifle will be found to be more economical than an ordinary repeating rifle of a different caliber.

This bold initiative taken by Mexico seems to present nothing but advantages.

Should Mexico eventually decide later to adopt an automatic rifle with more powerful ballistic properties than that of the Mauser of seven millimeters, it has none the less been in possession of a more perfect rifle than that of any other nation and has been able at small expense to lead the way in automatic rifles.

EUROPEAN NOTES.*

(Translated for Journal Royal Artillery.)

Firing at Balloons. This is a technical article dealing with high-angle ballistics.

The principle of the rigidity of the trajectory ceases to apply at high angles of departure, and it is necessary to give a correction for the height of the balloon as well as its direct distance. This may be done by the use of double-entry tables, or by an automatic cam embodied in the range-finder. Whichever method be adopted, the correction has first to be calculated.

The author proposes that each balloon gun be worked in conjunction with a one-man range-finding instrument. This instrument is to determine

- (1). The range.
- (2). The correction for angle of sight.
- (3). The speed of the balloon.

For the calculation of the correction, the ordinary flat-trajectory methods are unsuitable, and working in a number of small arcs is exceedingly laborious. The author prefers d'Alembert's method, as explained by Professor Cranz in *Artilleristische Monatshefte* of June, 1909. D'Alembert has proved that the solution of the ballistic equation can be reduced to a quadratic form instead of the ordinary cubic or intermediate equation, and this enables trajectories at all angles of elevation to be solved. The process consists of working out a table giving the relation between the inclination of the trajectory and the remaining velocity, the functions for any given trajectory are then plotted in the form of curves, and the areas bounded by these curves, and corresponding to the values which have to be determined, are increased with a planimeter instead of calculating them.

The International Aerial Exhibition at Frankfort, 1909. The historical section contains some interesting old balloons, such as the one used by the French and captured by the Austrians at the battle of Würzburg in 1796. The modern section is devoted to balloon materials and appliances. The old silk and cotton varnished fabrics are giving way to gas-proof cotton, which is made by pressing together two layers of cotton coated with rubber, with the rubber faces together. The whole is then vulcanized. An envelope of this material will last for about ninety ascents. Balloon fabrics are stained yellow to reduce the effect of the sun on the india-rubber; this color is unsatisfactory from a military point of view, and attempts are being made to get a good blue color which will be equally efficient as a protective.

Liquid hydrogen can now be carried in flasks; it is expanded by passing an electric current through it.

A fine assortment of barometers, velocimeters and other instruments was exhibited.

The Infantry Soldier's Pack. The latest German regulations allow the knapsack, cloak and camp-kettle to be temporarily relegated to the transport on emergency. The author considers that it will rarely be possible to carry this out on service. He proposes an improved belt, with a broad leather yoke-strap, which will admit of a better balancing of the weights carried.

**Kriegstechnische Zeitschrift*. Précis of Contents, for August, September and October, 1909.

German Experiments With Mechanical Transport. These extended over 20 running days. 17 motor trains and several motor lorries took part in them. The distance covered was 1461 miles, over good, bad and hilly road. 16 of the 17 trains completed the whole distance. The average pace was 6.7 miles an hour, and the best average for any one day was 7.94 miles an hour. The longest day's journey was 87 miles, partly over very bad roads. Mechanical transport was freely used in the German Army maneuvers, and will be employed on a very large scale in war.

Railways, with special reference to the electrification of main lines. This article deals principally with the history of railways from the time of Stephenson to the present day. As regards electric railways, the author does not go into technical details. He considers that electric railways will be cheap to work, principally because the current can be generated at those points on the railway where power is cheap; this applies especially to countries where water-power is available. The engines at the generating station will be far more economical than locomotives, which utilize only five per cent. of the value of the fuel in the form of energy. Trains can be run faster, and with less delay in stopping and starting.

The construction of railways will be cheaper, since an electric train in which every wheel is driven can surmount steep gradients.

Firing at Balloons. This is a mathematical article on the calculation of high-angle trajectories. The author considers that the process can be much simplified by taking the curve of air resistance as a polygonal curve, that is, a succession of straight lines. The degree of accuracy thus obtained is quite sufficient for practical purposes. The trajectory thus arrived at is plotted on squared paper on a large scale, and the remaining velocities are calculated from the inclination of the trajectory, the labor of integration being saved by increasing the curvilinear areas with the planimeter.

Italian Artillery Maneuvers, 1908. These exercises constituted a most instructive combination of practice and maneuver. They were held in the plains of Northern Italy, near Villafranca, over ground partly cleared for the purpose. Two brigades, one of three batteries and one of two batteries, took part in them; both brigades came into action, but only one brigade fired at a time, the other brigade using blank. There were three days of practice, each day on different ground. The article gives maps of the successive day's maneuvers, with the special ideas and operation orders issued.

Development and Organization of Communication Troops. (Continued.) After the Franco-German War it was found that the civil telegraph lines no longer sufficed for military purposes, and telegraph detachments were forwarded as part of the pioneer battalions. But the pioneers did not make good telegraphists, and independent telegraph battalions were formed. In 1899 an entirely new formation was adopted; the railway troops, balloon troops and telegraph troops were combined into one organization, and styled *communication troops*. At present there are four telegraph battalions, each consisting of three field telegraph companies and one wireless company. Besides these there are lines of communication telegraph companies and reserve telegraph companies. The above units connect the War Office with any headquarters (using the civil telegraph lines) and any headquarters with army corps,

divisions and independent cavalry. Within each division communication is maintained by the divisional communication companies, while the cavalry have their own light field telegraph. Wireless companies have no fixed place in the system of communication, but are used as required. Besides the above each fortress has its own telegraph detachment.

The first balloon detachment was formed in 1884. Spherical captive balloons were soon abandoned in favor of the cylindrical form, which is steadier and easy to observe from. In 1901 the detachment was increased to one battalion of two companies; a third company for dirigible balloons has now been added. All fortresses are now equipped with balloons and gas-generating plant.

Fortress Warfare; the combat at close quarters. This is an interesting account with plans and sections of the mining operations carried out by the Russians and Japanese at the siege of Port Arthur.

A gun for casting a line across a river. This is a heavy musket with recoiling barrel, the recoil being eased by a small hydraulic buffer. It fires a heavy bullet to which the line, which is five millimeters in diameter, is attached by a wire coiled into the form of a spring. It is capable of throwing the line for a distance of 120 yards, or 200 yards if a lighter line be used.

The combat at close quarters in fortress warfare. The difficulty of pushing home an assault under modern rifle fire will oblige the besieger to have recourse to mines, and the defender must make preparations in peace time to resist such an attack by building countermine galleries. Technical details and plans of permanent countermine galleries are given. For mine defense, a fortress will require four companies each of 200 miners.

The Schleyer automobile machine gun. This is a rifle-caliber machine gun mounted on an armored motor car. The car has the engines and bonnet in rear, it is of twenty horsepower, and is on solid rubber tires. The body is water-tight, and the car can be used as a boat, and driven by a screw propeller which is carried with it. The machine gun can be removed from the car and set up independently.

History and organization of transport troops. This chapter deals with mechanical transport. The Germans have made great progress in this respect, owing to the system of State encouragement of private industry. Large sums have been paid to manufacturers to induce them to turn out motor tractors and motor lorries suitable for use in war. The result is that motor wagons fit for military purposes are now available in large numbers in Germany, and in Germany alone.

For carrying out experiments with military motors a Mechanical Transport Company was formed in 1905, and a second company was added in 1907.

Details are given of the organization of transport troops in foreign armies; thus France has three railway battalions, and one telegraph battalion with driver company attached. Austria has three railway and telegraph battalions, and a communication section of twelve men (signalers and telegraphists for each regiment and for each artillery brigade). Russia has (besides the Siberian troops) twenty-five telegraph companies, one wireless company, twenty-four railway companies, one balloon company, six balloon sections and ten carrier pigeon stations; this in addition to the communication companies with the reserve and fortress troops.

Notes on the French maneuvers of 1909. The new French machine gun has been giving trouble. This gun was shown at the Franco-British Exhibition in 1908, and was described in the *R. A. Journal*, No. 8, Vol. XXXV. It has no water-jacket but is cooled by a radiator on the barrel. The result is that it gets red-hot. The French are now trying an improved radiator made of special alloy. The dirigible balloon *La République*, which was afterwards wrecked, was used at the maneuvers. It did not fulfil expectations, principally because it was unable to rise to any great height. It rarely attained a height of 2300 feet, and never succeeded in getting up to 3300 feet. It was supposed to drop reports to a motor car which followed it.

Railways, with special reference to the electrification of main lines. Germany is the home of the electric railway. Up to 1902, 130 German towns had electric railways, aggregating 2400 miles in length.

Various small German electric railways are described. Austria intends to electrify her railways by degrees, beginning with sections where water-power is available. Switzerland has the Simplon and several other electric lines. Italy, which possesses no coal, is devoting much attention to electric railways. In England, the London and Brighton Railway has an electric section.

Details of electric railways in other countries are given.

Notes.—An automobile wireless apparatus. This has a telescopic steel hoist 66 feet high which can be erected in six minutes. The Cologne military maneuvers of dirigible balloons. The Zeppelin, Parseval and Gross balloons took part in the maneuvers, also the military dirigible M. II. (Gross), and the privately owned P. III. The M. II. attained a height of 4950 feet. The dirigibles all maneuvered together, and made a number of four-hour trips without accident.

H. A. BETHELL, COLONEL, R.F.A.

Lord Kitchener, in his report on Australian defense, recommends the establishment of an army of a peace strength of 80,000, divided into a garrison force of 40,000 and a mobile force of 40,000—all to be enrolled, organized and equipped in the same way. The army will consist of 84 infantry battalions, 28 light-horse regiments, 224 guns, 14 engineer companies, and departmental troops in proportion. This force will be provided from trained men of from 19 to 25 years of age. Trained men between 18 and 26 years of age are to be called up in war time to raise the strength of the force to a total of 107,000. For the purposes of organization and training, the country is divided into areas, each providing a definite proportion of the fighting unit, in charge of a permanent instruction officer. Ten areas will make a group under a superior officer, who will be a brigade-major in war time. The whole of Australia is to be divided into 215 areas, giving two town or three country areas for each infantry battalion. The officer in command of the area will be the keystone of the citizen force.

supplied his command after the loss of Holly Springs, and the disembarkation of some of the expeditions on the Atlantic and Gulf Coasts would have been very instructive.

The "Introduction" is interesting and valuable, but it is thought the author errs in underestimating the value of the training gained in Indian campaigns. No general was more interested in the supply question than Sheridan and his knowledge was gained in frontier service; Stanley's expedition in 1874, and Crook's and Gibbon's in 1876, all extensive overland marches in a country destitute of all supplies except green forage and buffalo meat, were excellent primary schools in the art of supply.

The remarks under "Utilizing the Local Resources," "Statistical Data," "Duties of Subsistence Officers," "Fresh Bread," "Accountability," "Expeditions beyond the Sea" and "The Number of Wagons Required in Front of Advance Depot" are valuable and should be considered by all soldiers. "Disadvantages in the Use of Cattle on the Hoof" is timely, especially as the disadvantages increase in a tropical climate, and through ignorance in preparation and conditions under which it was used, a foolish prejudice against canned beef was created in our country.

The painful contrast between the politically prepared and conducted expedition to Cuba, short of everything except food which was not readily available, and newspaper correspondents not properly muzzled, and the military movement on Chemulpo can be read with benefit by soldiers and politicians.

Inexperienced officers, and in a great war we have hundreds of them, need detailed instructions, therefore, considering the vital importance of the subject to the successful prosecution of war, the little that has been written about it in this country and the detailed and general knowledge possessed by the author, it is unfortunate that he summarized and condensed to so great a degree.

The book should be read by every supply officer and by every line officer who hopes to be a general.

C. A. W.

The Seminoles.*

THE object of the writer was to diffuse, among those who go to Florida, a knowledge of the conditions of the life of a remnant of the Florida aborigines.

To prepare the reader for her very interesting descriptions of the Indians now living on the islands of the Everglades, the first part of the book is devoted to the early history of the conflicts between the whites and the lawful owners of a large part of lower Georgia and the whole of Florida. It is the same story of the cupidity of the whites and the disregard of promises and treaties on the part of the United States Government; but this reference to the early history is very meager and will hardly satisfy the historical student. It, however, leads up to the condition of the Seminole of to-day.

The task assigned to the successive military commanders was a difficult one. Whey they arrived on the scene it was always at a time

**The Seminoles of Florida.* By Minnie Moore-Willson. (New York.) Moffat, Yard and Company. 1910.

when active hostilities prevented negotiations leading to peace, and the various officers of the army were forced to insist upon the requirements of the United States Government and to wage a relentless war until the Seminoles should consent to move to the lands in the West set aside as Seminole reservations.

It is a long story, full of distressing incidents and it would fill a large volume.

That which is told in this very interesting volume may serve to draw attention to the necessity for a more complete civilization among these remnants of the Seminole tribe, half Indians and negroes.

That which is written would seem to establish the fact that these Indians have improved but little since 1855, when the writer campaigned from the Caloosahatchee to Billy Bow Legs' town for one year with no kindly feeling for descendants of Osceola and other treacherous and murdering chiefs—for treacherous they have been since Florida was purchased from Spain in 1819.

The outbreak of 1855 was not caused by the destruction of Billy Bow Legs' garden. It was caused by the presence of the surveying parties far from that portion of the Upper Everglades.

After frequenting the forts and securing presents and good treatment, an attempt to repeat "Dade's Massacre" was made by Bow Legs, and Lieutenant Hartsoff was wounded and war made inevitable.

The present condition and attitude of the Seminoles is pleasantly told, but we are also told that "they occupy a unique position with respect to the United States Government as being unconquered and unsubdued, having no legal existence nor allegiance to our nation."

Their future is and must be uncertain.

A. S. W.

Suggestions to Military Riflemen.*

IF nine-tenths of the riflemen of America were asked to give a formula for success in rifle-shooting, they would say, "Hold on the bull." The idea is that he who has cultivated close and hard holding has already eliminated, to a great extent, the most detrimental influence on the shooting of the recruit. When a man has learned to hold hard and knows when he is not doing so (to the extent that he can call his shots), he has the foundation. Building on this foundation, rifle and man can be attuned to a perfection that is almost uncanny. The rules are known, and the experience of others has been put in a form to warn us against possible mistakes. Lieutenant Whelen gives us in his little book the benefit of his wide experience in rifle-shooting and of his comprehensive study of the subject. The method of handling is within the understanding of the beginner and yet is sufficiently scientific to be worth the attention and study of the more experienced rifleman. The aspirant for individual honors will find in it the best possible advice on all details of the game—one of the most absorbing of sports, certainly—and the organization commander will acquire many valuable ideas. An adoption of the author's suggestions as to company practice should certainly put the company commander in the way of "getting results," which is, after all, the condensed formula of success.

G. M. R.

**Suggestions to Military Riflemen.* By First Lieut. Townsend Whelen, Twenty-ninth Infantry. Franklin-Hudson Publishing Co. 1909.

A French Verb Text-book.*

THE recent publication of Martin's French Verb Book has supplied a want that has been long felt in the instruction of French in this country, and as soon as the merits of this excellent work become generally known, it will no doubt be adopted as a text-book, not only in the military service but in our schools as well.

The author has treated his subject in a clear, practical way from the view-point of an experienced instructor, and has pointed out to the beginner not only the things that he must know but also he has provided against the natural difficulties that present themselves to the student's mind at the outset. Different from the majority of publications of a similar nature, the author has made his book a live text, replete with valuable information bearing directly on each verb, and so arranged as to be equally well adapted for study or for reference.

The arrangement of the matter and the treatment of the subject is quite original, and has for an object to impart a good working knowledge of the French language in the most practical way. The verb is so important in studying French that the student must master it from the beginning, and this book will apparently aid a beginner more than any text that I have seen. The work is divided into two parts as follows:

Part I.—Devoted to the conjugation of all the different kinds of verbs with explanations and examples illustrating their use. In this is included the Defective Verb.

Part II.—Devoted to lists of verbs for practice in the use of prepositions, use of the reflexive and the verb dictionary for reference. In Part I the following excellent features should be noted: (1) At the beginning the student is introduced to the constantly used verbs *to have, to be, to do, to make, to go*, etc., and throughout, the verbs are presented in order of their importance and not alphabetically.

(2) At the end of each conjugated verb are examples illustrating both the common and idiomatic use of this verb; also a list of model verbs with examples illustrating their use. This is something which is rarely treated very clearly in most verb books, and which will be of benefit to the future student and instructor.

(3) Both forms of the conditional mood are given in full, so that they become as familiar as the present or the imperfect. This is as it should be, for the subjunctive form is frequently employed, and many students fail to recognize it when translating.

The classification of the impersonal verbs is well conceived, and the treatment of the third conjugation before the second is an important innovation that is to be recommended. The verbs of the third conjugation, those ending in "oir," are very much more important and constantly used. Hence the student should learn to handle these common everyday tools of the language before making the acquaintance of the more uncommon ones.

The feature that the student will find of the greatest benefit and assistance is the list of examples at the end of each verb. In the majority of French verb books the translation of the infinitive alone is given, as for example, the verb "mouvoir"—to move. In French its use is very limited compared to the English use of the verb "to move,"

**The French Verb: Its Conjugation and Idiomatic Use.* By C. F. Martin, First Lieutenant Fifth United States Cavalry; Instructor Modern Languages, U. S. M. A. (New York.) Am. Book Co. 1910.

but usually the student is given no inkling of this, and very naturally falls into ridiculous blunders. Here the author has listed fifteen cases in which we use move where in French each case requires a different verb. This is but one instance of the aid given the student when preparing the verb. I mention "mouvoir," as its translation is so common, and I have seen so many mistakes made in its use.

In Part II, for more advanced work, are good lists of English sentences to be translated into French, showing the use of the verbs requiring the prepositions "à" and "de" before the following infinitive, and those governing the infinitive directly.

The Verb Dictionary at the end is an innovation in a Verb Book, but one that should meet with approval. It will be found a very valuable supplement to the French Dictionary. So often a student looks up a word in the dictionary and find a dozen or so different meanings placed after it. Which one is he going to choose? He does not know, but the average student will select the first, which is frequently the wrong one. To obviate just such embarrassment, the Verb Dictionary is designed, for it contains all commonly employed verbs with examples illustrating their various meanings. Here, of course, the verbs are arranged alphabetically.

For the ordinary student the author may have omitted the majority of the Defective Verbs, for they are not much used, but this may be pardoned, as without them it would be incomplete as a treatise of the French Verb.

The author throughout the text has apparently placed himself in the student's position, and it would seem that every difficulty and pitfall that besets a beginner has either been explained or has had attention called to it. It is a most excellent work.

ROBERT C. RICHARDSON, JR.,
Second Lieutenant, Fourteenth Cavalry.

Under the Red and Gold.*

A PLAIN, unvarnished record of the defending of that post by a detachment of two (2) lieutenants and fifty (50) Spanish soldiers.

It reads like fiction, and for the lesson in courage, fortitude and devotion to duty that it teaches it should occupy a prominent place in the library of every soldier.

Baler, a small, inaccessible town on the east coast of Luzon, had been taken by the insurgent forces in October, 1897, the small force defending it having been killed or captured. It was retaken by the Spaniards in January, 1898, and garrisoned by a battalion under Major Genova, until after the peace of Bica-Na-Bato, when on February 12th, 1898, a detachment of fifty (50) men, commanded by Lieuts. Don Alonso Zayas and Don Saturnino Martin Cerezo, relieved Major Genova's battalion.

The position of this small force can only be fully appreciated by one familiar with the location of Baler, and the topography of the surrounding country.

The first intimation of a renewal of hostilities came to the detachment on June 1st, but the siege did not begin until July 1st.

*Siege of Baler, Cerezo. (Kansas City.) Franklin-Hudson Pub. Co., 1909.

Penned up in a small church, with insufficient food, his companion, Lieutenant Zayas, killed in October, 1898, two-thirds of the command afflicted with *beri-beri*, compelled to shoot two of his command for treachery, the courage and fortitude displayed by Lieutenant Cerezo is wonderful. Lieutenant Cerezo surrendered his post at the end of the eleventh month, and then only after he had been convinced that Spain had surrendered the sovereignty of the Islands to the United States.

It is gratifying to know that the insurgent forces accorded this small band of heroes all of the honors of the war.

Aguinaldo, himself, publishes a decree in which he declares them "Worthy of the admiration of the world, for the valor, constancy and heroism with which that handful of men, cut off and without hope of any aid, defended their flag for a space of a year, realizing an epic so glorious and so worthy of the legendary valor of the *Cid*."

W. B. W.

The War of Secession.*

THE *embarras de richesse* encountered by the author of the work above designated—in the voluminous testimony bearing upon the events of our civil conflict—is present in a minor degree when the reviewer attempts the task of further reduction of the somewhat bulky volume under consideration. In spite of the limited range, in point of time, of the operations discussed, there is much interesting matter to be digested, and a further difficulty is imposed by the fact that the author's views embody certain appeals from verdicts which we have been accustomed to regard as final. To the student of the history of the Civil War—especially to the participant—the epoch defined in the title is little more than formative, the prologue to the drama to be enacted in the succeeding years, when the inchoate gathering of citizens in arms, at the call of duty as interpreted by either faction, should have been converted into effective soldiers. The veteran survivor of those early years, whether he wore blue or gray, looks back to the time as to the days of his boyhood—to a good many of us they *were* just that, indeed—to the time when we were only beginning to grasp the truth that war was a very serious matter, like a galvanic battery, easy to take hold of but very hard to let go.

The portion embracing the first 150 pages of the book is taken up with the consideration of matters which are purely introductory, treating of the political situation antecedent to the actual collision; the organization of the military establishment and other aspects of the subject, which, however necessary for the proper information of British readers, are fairly negligible for the uses of the public to which the *JOURNAL* addresses itself. In this connection it is still lawful to state that the author, although at some pains to indicate at the outset the distinction to be drawn between considerations of political policy and those of a purely military import, in several instances ignores, later on, the premises thus laid down, and discusses the events from the viewpoint of a military autocrat having absolute control of the resources, moral and material, of the theater of operations. It came to that, indeed, practically, but at a later period than that under consideration. But the gift of prophecy "before the fact" was hardly to be looked for

**The War of Secession, 1861-1862—Bull Run to Malvern Hill.* By Maj. G. W. Redway. (London.) Swan Sonnenschein & Co. 1910.

when both sides were as yet engaged in "learning war" in what the master head of that science has pronounced to be the only "proper school." Academically it may be well enough to say that the right policy of the Confederacy was to have abandoned Virginia and perhaps North Carolina and to have concentrated its forces in the interior; the comparison with the tactics whereby the Napoleonic invasion of Russia in 1812 was brought to disastrous failure, takes small account of the moral forces in either case, and leaves unsolved the question of the maintenance of the thus concentrated armies of the Confederacy, with the abandonment of their main sources of supply. The subsequent laying waste of the fertile Shenandoah Valley region by Sheridan in pursuance of a policy which has been the subject of criticism, even as applied to a hostile territory, is hardly to be considered as of application to the military situation of '61-'62, if only by readers of the difference between Russian serfs under autocratic sway and American free-men, who, as the author is at pains to state elsewhere, were the real supporters of the war, and who on the Southern side, at least, were largely inspired by the thought that they were defending their homes from invasion. The sturdy Virginians and Carolinians, who formed in large degree "that body of incomparable infantry"; who rode in enormous majority in the mounted squadrons and who mostly manned the guns of this army, would, we fear, have given but feeble, half-hearted support to their fore-doomed cause, lacking this source of inspiration. There were surprisingly few "original secessionists" in their ranks; it was a "condition," not a "theory" which confronted them, and like their illustrious chief, they accepted a situation whose existence they deplored. Our author is still quite justified in his stricture upon the policy which, at the outset, undertook the safeguarding of the extended frontier of the entire Confederacy, of which the Western Virginia operations were an illustration; rather undue space is given to these arduous marchings and counter-marchings, diversified by occasional collisions of the respective forces—dignified as "battles" in the language of the day—and tending to no result in the military situation, saving, as the author suggests, their bearing upon the future fortunes of Lee and McClellan, respectively. These well-nigh forgotten pages of the record claim two whole chapters of the book. They read now like very ancient history, indeed, as does that upon what the author calls the "Bull Run Campaign" of '61. In this regard it is not quite easy to follow his methods of induction.

A significant effect of the operations in Western Virginia was the sudden elevation of McClellan to high command and his popular investment with the title of "Young Napoleon"; in contrast with which, one now recalls the cloud which then obscured the military reputation of Lee who was destined to deprive him of much of the prestige thus cheaply won and eventually to lead to his retirement from active participation in the great events pending. It recalls to the memory of the Confederate of '62 how the wound which, after Seven Pines, removed Johnston from the command of the Army of Northern Virginia and put Lee in his place, was regarded as an almost irreparable calamity. So the executive in Washington, then "trying out" the newly constituted generals, may well have been beguiled by the sanguine, even bombastic, bulletins of McClellan, which may have voiced a confidence he did not feel; in the light of subsequent happenings this is entirely conceivable. Our author is far from undervaluing General McClellan's abilities within his limitations; we quote Chapter XI: "That McClellan was a man of great constructive powers no one will deny. * * * But

the fourfold task of combatting the Washington policy, forming strategic plans organizing the armies and controlling the tactical operations in the East was beyond his strength; and indeed such a task in 1861-62 would have taxed the powers of a Napoleon. McClellan failed and Grant, two years later, reaped where he had not sown"—and much more. of like tenor but too voluminous for quotation. Mr. Lincoln pithily defined General McClellan's fallacies in a sentence, written after the Maryland Campaign of '62: "If you are to wait until your last man and last horse shall have been properly shod, you will never move." He was essentially wedded to ideal conditions; a man who insisted upon fighting "by the book of arithmetic," but his arithmetic was often at fault; notably his binoculars were always out of focus when turned toward the hostile lines—he invariably saw double.

In a lengthy chapter of seventy pages the Valley Campaign of '62 is reviewed in minute detail. The author demurs at the use of the term as applied to the "secondary operations" of Jackson, "since he had no definite object in view, and his success or failure could be decisive of nothing." Yet it is admitted that one effect of the force under this active leader—which at no time exceeded 17,000 men, and was often much less—was the retention at various points of some 73,000 muskets which might else have gone to the aid of McClellan on the Peninsula, and that a large portion of this force was so disposed of as to enable Jackson himself to join Lee in time to participate in the movement upon the exposed Federal flank north of the Chickahominy—the vulnerability of which was in large degree due to the holding back of McDowell's Corps for the safeguarding of the Capitol from the only Confederate force which could conceivably menace it. It is stated that the influence of the valley was mainly a moral one, "which took its rise in the fears, real or assumed, of President Lincoln, for the safety of his Capitol," and the author repeatedly voices his convictions that the several mishaps which befell the Union armies in that region are to be referred not so much to Jackson's judicious management of his forces, or even to the absence of the like ability in his opponents, as to the interference of the Executive and the "Aulic Council" sitting in Washington, who persisted in directing not only the strategy, but even the minor tactics of a game of *Kriegspiel* of which they could not see the board. This confusion of functions was rather typical of the period, but the Federal commanders in the field perhaps felt the influence more severely than did their opponents; Jackson's prompt decision at the outset of his operations (January 31, 1862) may have had no little bearing upon the subsequent dispositions in which he had the advantage of a "free foot," unhampered by specific orders from Richmond, and with the largest liberty of action accorded him by his military superiors, who had already taken his guage as the commander of an independent force; he was ever at his best when away from immediate direction and supervision.

The portion of the text devoted to the operations from Yorktown to Malvern Hill, inclusive, is largely taken up with the consideration of the shortcomings of General McClellan as the commander of an invading army, the objective of which was the capture of Richmond. This ground has been sufficiently gone over by numerous writers and the events are already well known to all students of the war; possibly no period of the Civil War has been more discussed, and it would seem to be a mere squandering of ammunition to further emphasize the difference between the promises and the performances of the Commander of the Army of the Potomac; more to the purpose is the consideration

of some failures on the part of the Confederates to profit by the advantages presented by the developments of the campaign. For while the advance upon Richmond, in the presence of actual opposition speedily resolved itself into the endeavor to rescue the investing force from utter disaster, the defenders seem to have let more than one opportunity escape them of inflicting a "knock-out" blow, besides paying a heavy price for such advantage as they really reaped. In this connection Jackson's inaction (June 29-30) is the subject of severe censure. We cannot quite follow the author in ascribing to the man who gained the *sobriquet* which has outlasted his baptismal name, on Sunday, July 21, '61, an extreme unwillingness to engage the enemy on June 29, '62. Rigid Presbyterian as he was, Jackson was little prone to consult the church calendar with the enemy in front; his last appearance on the field of battle, and perhaps the cause of his "untimely taking off," was in pursuance of the resolve to press the advantage gained upon the ensuing (Sunday) morning of May 3, '63. The fact seems that as with Napoleon at Waterloo, the human mechanism had reached the limit of endurance and demanded rest. The author omits to take into account the hurried ride of 100 miles from Frederickshall to Richmond and back, immediately preceding the Seven Days' battle. Equally out of character is the suggestion that he "sulked in his tent" because he considered that undue proportion of the work in hand had been given to his troops; anyone who ever served under him can but smile at the thought—that was not "Stonewall Jackson's way." On the other hand, the forces on the Confederate right, south of the Chickahominy, under Magruder, Huger and Holmes aggregating twelve brigades and eighteen batteries, are acquitted of blame for having failed to interrupt the occupation of Malvern Hill, although, in another passage, the author says that Lee's Campaign failed "because of lack of vigorous action on his right," a conclusion which has stood for many years and which will probably endure.

Of the cavalry operations in conjunction with the campaign the author gives quite a detailed account and institutes comparisons between the methods in which that arm was employed which are greatly in favor of the Southern horse. This can hardly imply anything like *parti pris*, as it is of record that up to that time little attention had been given to the Federal Cavalry in its proper functions, later so effectually applied by Sheridan and others. With regard to the force sent after Stuart in his "Pamunkey Raid," we have General Cooke in command of the cavalry described as having seemed "to have regarded his force as a reserve for the day of battle," that when he did pursue he "tied his legs with infantry." This officer is quoted as saying, "the enemy was supported by infantry no doubt"—a singular view as applied to a movement in which celerity was all-important. The author adds, "The cavalry leader who needed the support of infantry was already obsolete." Stuart was also active during the period covered by the series of engagements, June 26-July 1, and seems to have expedited some passages of the "change of base." Apropos of the destruction of stores at White House he says: "If the Federal people can be convinced that this was a part of McClellan's plan * * * they certainly can never forgive him for the millions of public treasure that his superb strategy cost the nation."

An excellent feature of the book is that of the series of detached maps contained in a pocket inside the cover, which enables the reader to follow the operations they illustrate without the constant necessity

of turning pages to consult them. The book, on the whole, is a valuable and interesting contribution to the literature of the great conflict. It is always salutary "to see ourselves as others see us."

ALLEN C. REDWOOD.

A Volunteer Cavalry Regiment.*

THE history of this regiment differs somewhat from many regimental histories heretofore published. The committee having the matter in charge have attempted to record the life of this command from its organization to the date of its muster out, in a plain, matter-of-fact way. The committee dispenses with the very common practice of lauding the bravery and heroism of its members, to give the impression that it was the best, if not the only regiment which did any fighting, and, therefore, the credit for putting down the Rebellion should largely be given to its officers and men.

The contents of the volume comprise an historical sketch covering eighteen pages of the book; this is followed by an itinerary by Capt. T. J. Grier (now deceased) from a diary he kept while with the regiment from its organization to its final muster out as a part of the Third Regiment Pennsylvania Provisional Cavalry (October 31, 1865). This itinerary is of much value, showing where the command was and what it was doing on every day of its service.

Its operations at Hanover and Gettysburg, Pa., and Hagerstown, Md. (1863), are treated by the late Lieut.-Col. John W. Phillips. Other important engagements (1863-64) are treated by participants.

The book also contains a brief sketch of each company, with a list of killed, wounded and died in service, and a complete roster, giving the name and record of each officer and man belonging to the regiment during its three years' service.

The names and addresses, so far as possible to obtain them, are also given of the survivors of the regiment.

This regiment served with the Cavalry Corps, Army of the Potomac, and with General Sheridan in the Shenandoah Valley, and the names and dates of the fifty engagements in which it participated are duly recorded.

The volume is illustrated with many half-tone portraits from war-time photos of former officers and enlisted men together with a frontispiece in color of the regimental standard.

The book comprises 300 pages, printed in good, clear type on exceptionally fine paper and is of especial interest to all survivors and their friends and relatives as well as all students of the Civil War and of the famous Cavalry Corps of the Army of the Potomac.

J. ANDREW WILT.

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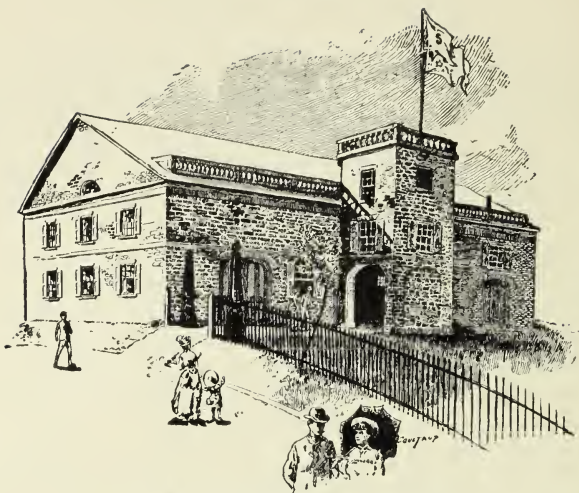
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 ERRATA.

(May-June JOURNAL.)

Page 464 (line 24) should read "Samuel Nicoll Benjamin."
 Page 465 (last line) should read "Orlando Metcalfe Poe."
 Page 468 (line 34) should read "Fredk. Edward Prime."
 Page 469 (line 10) should read "Every cannonier."
 Page 475 (line 8) should read "Wm. Borrowe."
 Page 476 (line 7) should read "Franck E. Taylor."
 Page 477 (line 22) should read "Henry Alonzo Huntington."
 Page 544 (line 12) should read "boards" instead of "bombs"; line
 14 should read "lack" instead of "pack."



THE MUSEUM OF THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES,
GOVERNOR'S ISLAND, NEW YORK HARBOR.

Editor's Bulletin.

Prize
Subjects,
1910.

THE subjects selected for the Gold and Silver Medals, the Seaman and the Reeve Memorial Prizes for the current year are worthy of the attention of both readers of and contributors to the contents of this JOURNAL. (See pages 175 and 176.)

Education
and
Defense.

Under "Comments" will be found some interesting views by leading educators and others upon the leading essays published in the March number.

Accessions
to
Member-
ship.

List of officers who have joined the Military Service Institution since last publication:

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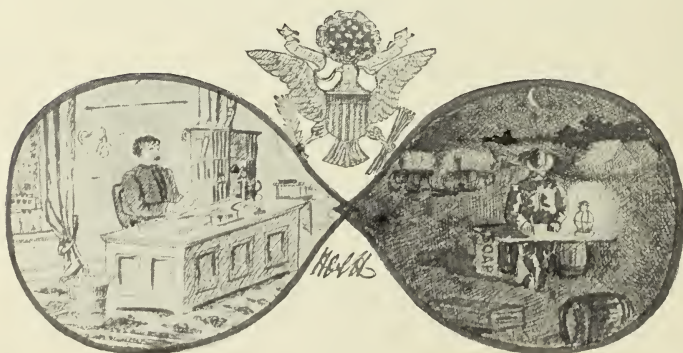
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Journal
of the
Military
Service
Institution
1878
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1910

Governor's
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THE JOURNAL

SEPTEMBER-OCTOBER, 1910



OME features of the JOURNAL for early publication are noted as follows:

- I. "THE STONEMAN RAID." A chapter from a "History of the campaign of Chancellorsville." By Major John Bigelow, Jr., U. S. Army (retired); now in press.
- II. "THE PECULIARITIES OF WAR." By Major James Chester, U. S. A. (retired).
- III. "SUMMARY PUNISHMENT AND THE SUMMARY COURT." By Capt. Marr O'Connor, Actg. Judge Advocate, U. S. A.
- IV. "THE EMPLOYMENT OF RUSSIAN ARTILLERY IN MANCHURIA." (Trans.) By Lieut. E. Santschi, 15th Infantry.
- V. "A REVIEW OF THE SERVICES OF THE REGULAR ARMY IN THE CIVIL WAR, '61-'65." The Artillery. (Continued.) By Major John C. White, U. S. A. (retired).
- VI. "MILITARY INSTRUCTION IN THE HIGHER CIVIL SCHOOLS." (Trans. from the French.) By Lieut. Robert Coker, 12th Infantry.
- VII. "METHOD FOR THE INSTRUCTION OF THE JAPANESE RECRUIT." (Trans. from the Spanish.) By Lieut. Oliver A. Dickinson, 5th Infantry.
- VIII. "IDEAS CONCERNING THE EMPLOYMENT OF RAILROADS IN WAR." (Trans.) By Lieut. Emile V. Cutrer, 11th Infantry.
- IX. "TYPES AND TRADITIONS OF THE OLD ARMY."
 1. "Gen. Joseph Hooker and his Place in History." (III.) By Lieut. G. A. Taylor, C. A. C.
 2. "A Cadet Round Robin in 1822." (Facsimile.) With Notes.

THE PUBLICATION COMMITTEE invites contributions of original papers, translations and comments upon current topics. Attention is called to "Gold Medal," "Seaman" and "Reeve" prizes described elsewhere.



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Membership dates from the first day of the calendar year in which the "application" is made, unless such application is made after October 1st, when the membership dates from the first day of the next calendar year.

Initiation fee and dues for first year \$2.50; the same amount annually for five years subsequently. After that two dollars per year. This includes the Journal. Life membership \$50.



Gold Medal—1910.

First Prize—Gold Medal, \$100 and Life Membership.*

Second Prize—Silver Medal, Honorable Mention and \$50.*

I.—The following is published for all concerned:

Resolved, That a Prize of a Gold Medal, together with \$100 and a Certificate of Life Membership, be offered annually by THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES for the best essay on a military topic of current interest, the subject to be selected by the Executive Council, and a Silver Medal and \$50 to the first honorably mentioned essay. Should either prize be awarded more than once to the same person, then for each award after the first, a *Clasp* shall be awarded in place of the medal.*

1. *Competition to be open to Members and Associate Members only.*

2. Each competitor shall send three copies of his essay in a sealed envelope to reach the Secretary *on or before January 1, 1911*. The essay must be strictly anonymous, but the author shall adopt some *nom de plume* and sign the same to the essay, followed by a figure corresponding with the number of pages of MS.; a sealed envelope bearing the *nom de plume* on the outside and enclosing full name and address, should accompany the essay. This envelope to be opened in the presence of the Council after the decision of the Board of Award has been received.

3. The prize shall be awarded upon the recommendation of a Board consisting of three suitable persons chosen by the Executive Council, who will be requested to designate *the essay deemed worthy of the prize*; and also in their order of merit those deserving of honorable mention.

In determining the essay worthy of the prize, the Board will be requested to consider its professional excellence, usefulness and valuable originality, as of the first importance, and its literary merit as of the second importance. Should members of the Board determine that no essay is worthy of the prize, they may designate one or more essays simply as of honorable mention; in either case, they will be requested to designate one essay as first honorable mention. Should the Board deem proper, it may recommend neither prize nor honorable mention. Should it be so desired, the recommendation of individual members will be considered as confidential by the Council.

It is suggested that the members of the Board of Award consider it a part of their duty to invite attention to phrases of an otherwise acceptable paper which, in their judgment, serve to weaken the effect of the argument of the writer.

4. The successful essay shall be published in the Journal of the Institution, and the essays deemed worthy of honorable mention shall be read before the Institution, or published, at the discretion of the Council, which reserves the right to publish any other essay submitted for a prize, omitting marks of competition.

5. Essays must not exceed **ten thousand words**, or **twenty-five** pages of the size and style of the JOURNAL (exclusive of tables), nor contain less than five thousand words.

*Separate subjects for 1910 see following pages.

Annual Prizes.

Gold Medal Prize, 1910.

GOLD MEDAL, \$100, AND LIFE MEMBERSHIP

FOR THE BEST ESSAY ON

"What measures should be adopted for effective prevention of unsanitary conditions in the early stages of volunteer camps in time of war?"

Board of Award:

Brig.-Gen. W. M. GRAHAM, U. S. A. (Retired).

Lieut.-Col. J. R. KEAN, Medical Corps.

Lieut.-Col. D. D. GAILLARD, Corps of Engineers.

Silver Medal Prize, 1910.

SILVER MEDAL, \$50, AND HONORABLE MENTION

FOR THE BEST ESSAY ON

"How far, in time of peace, should the authority of the United States be further extended over the organized militia of the various states and territories?"

Board of Award:

Brig.-Gen. T. J. STEWART, Adjutant-General, Pa.

Bt. Brig.-Gen. W. B. HOTCHKIN, N. G., N. Y.

Lieut.-Col. S. E. SMILEY, Adjutant-General, D. C. M.

For rules governing the competition, see "Rules for Gold Medal, 1910," page 174.

Annual Prizes.

THE SEAMAN PRIZE, 1910.

(Founded by Major L. L. Seaman, M.D., LL.D., late Surgeon, U. S. V.)

ONE HUNDRED DOLLARS.

For best essays on subjects selected by Major Seaman and approved by Council; competition open to all officers and ex-officers of Army, Navy, Marine Corps, Marine Hospital Service, Volunteers or National Guard; in other respects same as Gold Medal prize except that essays are limited to 15,000 words, and are due December 1.

Subject:—"How can auto-intoxication*, that rarely recognized disease, which has directly or indirectly caused more invalidism and mortality in the United States Army than all other pathogenic causes combined, be prevented?"

NOTE—The above subject is worded exactly as written by Dr. Seaman. While the Council of the MILITARY SERVICE INSTITUTION is not prepared to indorse or deny the opinion of Dr. Seaman, the importance of the eradication of this cause of non-efficiency among our soldiers cannot be insisted upon too emphatically.

Board of Award: WILLIAM M. POLK, M.D., Dean Med. School, Cornell University; Colonel LOUIS M. MAUS, M.C., Chief Surgeon, Department of the Lakes; Lieut.-Colonel WILLIAM H. ARTHUR, M.C., Walter Reed General Hospital, D. C.

THE REEVE MEMORIAL PRIZE, 1910.

(In Memory of the late Bvt. Brig.-Gen. I. V. D. Reeve, U.S.A.)

SIXTY DOLLARS AND CERTIFICATE OF AWARD.

To be awarded annually upon the recommendation of a Board of three suitable persons for the best short paper upon a subject of general interest to the Service, selected by the Council. Competition open to the Army, Navy, Marines and National Guard. Papers to be submitted not later than May 1, 1911, and to contain not more than 4500 nor less than 3500 words. Conditions, in other respects, to be the same as for the Gold Medal Prize.

Subject:—"Is the present system of detail to Staff Departments conducive to the discipline and efficiency of the Army? Should it be revised?"

Board of Award:—Hon. HENRY A. DUPONT, U. S. Senate; Brig.-Gen. WILLIAM CROZIER, U. S. A.; Brig.-Gen. TASKER BLISS, U. S. A.

*Self-poisoning by toxic matters generated within the intestinal canal or other parts of the body.

JOURNAL
OF
THE MILITARY SERVICE INSTITUTION
OF THE
UNITED STATES.

"I cannot help plead to my countrymen, at every opportunity, to cherish all that is manly and noble in the military profession, because Peace is enervating and no man is wise enough to foretell when soldiers may be in demand again."—GENERAL SHERMAN.

Vol. XLVII. SEPTEMBER-OCTOBER, 1910. No. CLXVII.

SUMMARY PUNISHMENT AND THE
SUMMARY COURT.

BY CAPTAIN MARR O'CONNOR, ACTING JUDGE-ADVOCATE.



ALMOST without exception, reports of department commanders for the past fiscal year have contained references to the unduly large number of trials by summary court, and the tendency that seems to exist in some degree to shift to the summary court a large part of that burden of maintaining the standard of discipline which properly belongs to company commanders. The fact is deplored that company commanders, in dealing with minor offenses, do not resort more frequently to the corrective means—deprivation of privileges, extra fatigue, etc.—advocated by Army Regulations, and the tenor of nearly all the reports indicates a belief that the summary court should be used as an instrument of discipline for minor offenses only when those means have been tried and have failed of their purpose—that is, in cases of chronic offenders.

Doubtless part of the fault may be ascribed to inexperience of company commanders in these days of absenteeism, but charges preferred do not get to the summary court for trial unless referred to it by the post commander.

It is generally recognized that that system of discipline is best which least interferes with a company commander in its administration, since he is familiar with the personal characteristics of his men and knows the treatment to which offenders of his organization will best respond better than anyone else

can. For this reason, probably, department and post commanders are reluctant to interpose, but to effect a substantial reduction in the number of trials it is obvious that effort should be made to attain something like uniformity of method, for there are widely diverse views as to what offenses are appropriate subjects for trial by summary court and what may properly be disposed of by imposition of summary punishment.

It is impossible, of course, from the brief report of a trial received at a department headquarters fully to determine what motives actuated a company commander in bringing a soldier who has no previous convictions to trial for, say, absence from a formation; the soldier may have been given every chance before resort to trial, or the contrary may be true. The following is quoted from an order on the subject issued by the general officer commanding the department in which the writer is serving as judge-advocate:

"The records of trials by summary court received at these headquarters, evince a tendency to make the summary court an instrument of discipline in many cases that might well be disposed of by means within the control of company commanders.

"While it is desired to bring troops in this department to the highest attainable standard of discipline, it is believed that it may be better done by more frequent use of the methods advocated by paragraph 961, Army Regulations, than by shifting to the summary court an undue part of the burden of maintaining that standard.

"Trials will be reduced to a minimum consistent with the ends of discipline; charges preferred will be carefully scrutinized by post commanders before being referred to the summary court.

"A soldier should rarely be brought to trial for a first offense, unless it is a flagrant one. The minor offenses will not be made subjects of trial except in cases of incorrigibles with whom company discipline has been tried and failed, or when the soldier demands trial; in either event, if the soldier has no previous convictions, an appropriate notation will be made on the report."

The increase in number of trials I believe to be due, in large measure, to the efforts of company commanders to rid their organizations of undesirables under the provisions of the last Executive Order, by which dishonorable discharge may be imposed for any offense if the soldier has a sufficient number of previous convictions. If a soldier proves to be insensible to the mild correctives of kitchen and stable police, post fatigue and suspension of pass privileges, his company commander naturally concludes that he is a worthless soldier, and resolves to get rid of him by the previous conviction route—the soldier is a marked man, and the smallest infraction of discipline on his part means

trial, the company commander regarding each trial as a step toward the accomplishment of his object.

This tends to breed two evils. First, after a few convictions, the soldier, knowing he is marked for sacrifice, is apt to become indifferent to his fate, and he may be a man for whom, under different circumstances, there might be some hope of ultimate reformation; second, it is not at all difficult to find a man at fault when it is exactly what one desires to do.

Two remedies suggest themselves—enlarge the scope of a company commander's authority in respect of summary punishments, securing uniformity as far as may be desirable by a scale of punishments fixed by Executive Order or regulation; and give him greater facilities in ridding his organization of the worthless and the incorrigible.

Regarding the first, a glance at the system of dealing with minor offenders which prevails in the British Army, because that army more nearly approaches ours in the personal characteristics of its soldiers than any other foreign army, may be of interest. In that army, company commanders are enjoined to avoid bringing an offender to trial by court-martial if the ends of discipline may be served by infliction of summary punishment, in respect of which they are vested with powers of considerable latitude, the soldier having no right to elect trial except for the more serious offenses. "Conduct-sheets" are kept, which show all summary punishments awarded, and which are subjects of inspection by post and department commanders and inspectors-general. A soldier may earn cancellation of entries against him by continued good-conduct for a stated period; entries are also cancelled by re-enlistment.

The summary punishment for minor offenders in greatest use in their service is confinement to barracks, which, in the opinion of the writer, is wholly admirable. It may be imposed for any period up to fourteen days, during which the soldier is required to answer his name at uncertain hours throughout the day, and is employed on fatigue to the fullest extent possible so as (best feature of all) "to relieve well-conducted soldiers therefrom." He attends all duties, and if those and the fatigue do not sufficiently occupy his time, he may be required to perform punishment drill, also a good feature; for the frequent transgressor, at least, is rarely a well-instructed soldier. To many officers there will be nothing strikingly novel in this—I

have known a few company commanders in our service who have tried similar methods with excellent results.

A system somewhat analogous was in vogue in our navy some years ago, and may exist now. By it men were graded in classes according to conduct, and a man's liberty (pass) privileges depended upon the class in which he was graded; he was also subject, when not on routine duties, to employment on extra fatigue, the degree of its dirtiness, laboriousness and discomfort depending also upon his class.

As to the second, it is axiomatic, if trite, that our army will more nearly approach perfection the more closely its business methods approximate those of our large corporations (nothing is farther from the writer's mind than elimination). In them an employee is not given an allowance of a stated number of defaults which he may commit before he may be discharged; his tenure depends upon the manner in which he performs his duties. Why, then, give a soldier such an allowance, if it may be so termed, and, except in cases so rare as to be negligible, not permit a company commander to rid himself of a worthless man until he has exceeded it? The "allowance" is an excellent thing, and if anything, leans toward the side of too great generosity, but it does not quite fill the bill—there should, in addition, be a manner of getting rid of the worthless not dependent upon the number of convictions for breaches of discipline. It should not be too easy a method, but it might well be a less difficult one than we have at present.

We are all familiar with the individual who is utterly worthless as a soldier, but who is the despair of company commanders who cannot get rid of him because he is too spineless ever to commit an actual offense. Between him and the man whose normal habitation is the guard-house are various classes of offenders, many of whom cannot be reached by the previous convictions ladder, which requires considerable time to construct; a company commander would scarcely resort to it if he had a less complex way of accomplishing his purpose.

To enable a company commander to get rid of an undesirable, I would advocate allowing him to apply for a board similar to that which is convened now when it is proposed to give a soldier a character less than good on discharge. This would eliminate the personal factor as far as possible. Let the board hear evidence from both sides, and if it finds that for any reason the soldier is not worth retaining, and recommends it, let a

discharge as "unsuited to the service" be given upon its approved finding. No stigma would necessarily attach to the soldier; the cause of discharge might be ineptitude, for example, and he would be given the "character" the board considered that he deserved. The very thing (except that there is no board) is done now in the Philippine Scouts by the commanding general of the Philippines Division upon the recommendation of the company commanders, and gives entire satisfaction. It may be objected that this would offer an incentive to be delinquent to those soldiers who desire to escape from what is to them an irksome bargain; let them do it—the main object, weeding out useless material, will be accomplished. The abuses to which such a method might be subject are very obvious, but properly safeguarded, there should be no more likelihood of injustice to the soldier than there is with the "character" board; save that in the one case the time he would have to establish fitness would be indeterminate, and in the other it is normally three years.

There is yet another factor that might be employed in the line of the army, which may also be not at all novel. In those organizations in which privates are graded as first-class and second-class, trials by summary court and forfeitures of pay are markedly fewer than in those which do not so classify the privates. Doubtless this is to be attributed partly to the fact that the staff corps attract many re-enlisted soldiers of proven character, but much of it is indubitably due to the potent instrument of discipline such a classification puts in the hands of their company commanders. In addition, it has the merit of affording a means of distinguishing between indifferent soldiers and those who are proficient, but who do not meet the warrant standard—in other words, to simlize further, a good workman is better compensated than an indifferent one. But this is digression.

LOILO, P. I., March 28, 1910.

THE IMPORTANCE OF THE SERVICE OF THE EVACUATION OF THE SICK AND WOUNDED BY THE MEDICAL DEPARTMENT IN TIME OF WAR.

BY CAPTAIN MANUS McCLOSKEY, U. S. ARMY,
FOURTH FIELD ARTILLERY.



THE purpose of this paper is to present to the officers of the line of the army the importance of a subject which, it is thought, has received too little weight in the consideration of tactical and strategical problems and in maneuvers.

Briefly, the evacuation of sick and wounded is performed by means of first-aid stations, dressing stations, ambulance stations, field hospitals, stations for slightly wounded, evacuation hospitals, base hospitals and hospitals in the home country.

FIRST-AID STATIONS

These are usually established by the regimental surgeon after consultation with the regimental commander. Their function is to furnish first aid to the wounded and prepare them for transportation to the dressing station. Ordinarily no operations are performed here.

First-aid stations should be located where the wounded can walk or be carried to them from the firing line with facility; where ambulances can easily reach them from the dressing stations, where they are protected from fire, and preferably where water and shelter are available. They should not be too close to the firing line nor too far in rear. The use of buildings during the Russo-Japanese War was frequent and was due to the protection afforded by the earth walls.

DRESSING STATIONS

These are established by the ambulance companies under instructions from the chief surgeon after the latter has consulted with the division commander.

The ambulance companies, by means of ambulances or litters, transport the wounded from the first-aid stations to the dressing

stations. From here the wounded are transported to the field hospital.

The function of the dressing station is to give wounds a dressing commensurate in thoroughness with the number requiring treatment.

It is important to locate dressing stations where they are easily accessible to ambulances and at the same time where the wounded can be readily evacuated to field hospitals over roads not likely to be used by ammunition or supply trains or troops moving to the front. The stations should be sheltered from fire and have fuel and water convenient. They should not be too close to the firing line nor too far in rear, as sometimes happened in Manchuria.* If established too early in the fight, the station may be too far in the rear when the line advances; if established too close to the firing line, the station may fall into the enemy's hands in case of a repulse. For this reason it is well to hold most of the ambulance companies in readiness until the action develops.

Buildings were extensively used in Manchuria.

FIELD HOSPITALS.

These are assigned stations by the division commander, or by the chief surgeon in the absence of instructions. They are usually centrally located and beyond the zone of conflict, three or four miles in rear of the dressing stations; but their location and distance depends upon the terrain. They should be placed as near the dressing station as shelter from fire will permit. To facilitate receipt and evacuation of wounded, they should be placed on good roads or on railroads.

STATIONS FOR SLIGHTLY INJURED.

These are designated by the commander in field orders where practicable, otherwise by the chief surgeon. They are established to relieve dressing stations and field hospitals (which will be fully taxed) of the slightly wounded who can walk and require but little attention and to prevent these from straggling over the battlefield. They should be placed on roads which are the natural lines of movement to the rear.

The collecting station for slightly wounded is a new feature in our service, and no special medical department organization is provided for the service at the station. The chief surgeon must detail the necessary surgeons, men and supplies and make ar-

* War Surgical Retrospects and Prospects. M. I. D. 12354, Fischer, p. 160, 163.

rangements for the evacuation from this point to places in rear. They would usually come from an ambulance company or a field hospital, depending on conditions. Detachments of the provost guard will be at these stations to return skulkers to the front, maintain order, etc.

EVACUATION HOSPITALS

This term, evacuation hospitals, is applied to those hospitals on the line of communications to which the wounded are evacuated from the field hospitals. They are established by and are under the control of the chief surgeon of the line of communications.

BASE HOSPITALS

As the name implies, these are established at the base, and from them the sick and wounded are sent to general hospitals in the home country or returned to the front.

SERVICE OF THE LINE OF COMMUNICATION.

In addition to the establishment of evacuation and base hospitals, the service of the line of communication includes the maintenance and operation of rest stations casual and convalescent camps, contagious disease hospitals, the transportation of patients, the return to the front of men fit for duty, the transfer to general hospitals or home stations of men gravely or permanently incapacitated and the procuring and forwarding of medical supplies.

In addition to those mentioned above, the sanitary formations consist of transport columns, hospital trains, ships and the necessary supply depots, etc.

METHODS EMPLOYED.

Having given the above brief outline of the means employed in the evacuation of sick and wounded in time of war, we shall now consider the methods to be adopted.

Let us put ourselves in the place of the chief surgeon of a division on the eve of a battle. He has placed under his command a sanitary personnel of 101 commissioned officers and 877 enlisted men belonging to the medical department, and, for transportation, 48 ambulances and 62 wagons, with a total of 836 animals. In time of war this will be augmented by the detail of bandsmen, civilian teams and others.

To use this large force intelligently, he must first of all know his commander's plan. A lack of confidence in the chief surgeon

on the part of the commander is certain to be reflected in vacillation and uncertainty in the removal of wounded, with a consequent lack of mobility of the fighting force. Von Verdy says (page 341): "To get the best service from the medical corps, it is absolutely necessary for the commander to keep medical officers fully informed concerning the course of events. But before the beginning of an action a general survey is practicable only in exceptional cases, and it is recommended not to dispose too quickly of all of the resources of the medical service." And (page 343):

"The more co-operation provided for the finding and collecting of wounded and the greater the centralization of the surgical personnel, whereby one surgeon can come to the assistance of another, the greater blessing will the medical department be." ("Studies in the Leading of Troops," vol. I.)

The chief surgeon must know when a battle is imminent in order to collect his forces and make preparations. He must know if his commander will take the offensive or defensive. If offensive, he will hold in reserve certain units, perhaps one ambulance company and one field hospital, to accompany the troops designated to pursue the enemy. If defensive, he will hasten the evacuation of the wounded to the rear so that in case of a possible retreat none but seriously wounded, unable to be moved, will fall into the enemy's hands, and these will, if practicable, be left in buildings, not in a field hospital. The chief surgeon knows that his sick and wounded who fall into the enemy's hands become prisoners of war under the terms of the convention.

He must know where the heaviest casualties will occur so that he can direct there the larger part of his personnel, etc. He must know the probable intentions of the enemy and thus avoid loss of personnel or material.

He must know what roads will be used by reinforcements, supplies and ammunition so as to avoid these and use others not likely to be congested.

He must know what wagons from the ammunition, supply and field trains and what civilian transportation will be available for the carrying of the wounded.

He must know the local resources in respect to civilian hospitals and buildings available as hospitals, and the number of physicians, surgeons and nurses who could be called upon to care for wounded.

After the battle begins he must be fully conversant with the

commander's intentions, the terrain and the conditions on the battlefield, so that dressing stations, ambulance stations, field hospitals and stations for slightly wounded may be judiciously placed.

During the course of the battle the chief surgeon must see that a steady flow of the sick and wounded to the rear is maintained, that no field hospital becomes anchored through the accumulation of any wounded able to be moved, that every officer and every enlisted man of the medical department is doing his full duty in ministering to the wounded and expediting their removal to the rear, and at the same time the chief surgeon must bear in mind that there is a limit to the physical endurance of men and animals, that strength must not rarely be conserved for use on the morrow. To avoid undue fatigue of the sanitary personnel, troops of the line must at times be detailed to assist them. One of the most effective ways of doing this is to effect a temporary truce between the lines for the purpose of clearing the battlefield. Periods of darkness may be used. Then line troops, search for wounded, assist in conveying them to the rear and bury the dead. Thereby the labor of the sanitary personnel is lightened and they are given a respite which prepares them for future usefulness. That such a rest is necessary is shown by the following:

At Wafangu 10 surgeons dressed 2240 wounded in one day. (Fischer, page 190.)

During the Battle of Sha Ho the Red Cross and volunteer organizations claim to have received 9162 wounded and to have dressed 4264. (Fischer, page 161.)

After the battle of the Yobe, the fifteenth hospital (Russian) received 1036 wounded, giving 115 to each surgeon working twenty hours. (Colonel Havard's Report, page 53.)

Many other instances can be cited, but the above are deemed sufficient.

NECESSITY FOR REMOVAL OF SICK AND WOUNDED

The necessity for the removal of the sick and wounded may be considered from five view-points: *First*—The effect on military operations of an accumulation of sick and wounded. The chief end of all military operations is the defeat of the enemy, and any cause that hinders free movement of an army lessens the chances of defeating the enemy. A division commander considers his division a fighting unit and his trains as almost a necessary evil to which efforts must be bent in order to prevent their

becoming a source of possible delay in the onward march of the division. What, then, would he consider a 10 per cent. loss, or, say, 2000 wounded, hundreds of whom could be moved only at the rate of four per ambulance? This conception of the division or army being a fighting unit which must maintain its mobility is the keynote of success. Of course, wounded may be abandoned, but mobility purchased at the price of humanity would cost a general his commission. Von Verdy says (page 332): "After a fight, the first thing to do is to get the troops ready to fight again." This means to re-establish order, replenish ammunition, to eat and sleep, to bring up supplies, to get rid of sick and wounded.

When we consider the number of casualties in some battles, the importance of this factor is apparent. At Seven Pines, out of a total of about 90,000 troops, there were 11,000 killed and wounded; at Gaines Mill, from the same number, there were 13,000; at Gettysburg, of a total of 160,000, about 37,000. Major Lynch reports (page 45): "In some of the battles of the war (Russo-Japanese) the number of wounded at certain points was so great that the medical department was unable to remove them, and regimental or brigade commanders sent whole companies, under their own officers, to collect and to carry them to places of comparative safety."

Fischer says that it took two weeks to evacuate sick and wounded after the Sha Ho (page 225). Here the Japanese losses were reported as nearly 16,000, the Russian nearly 56,000 (Havard, page 29).

Second—The psychological effect on the well soldier of the sight of sick and wounded.

There can be no question that the sights and sounds incident to the presence of dead and dying exert an evil effect on the morals of troops and furnish an incentive to panic. This is one reason why the wounded should not be evacuated over roads used by reinforcements.

Seeing the dead and dying makes fear grip the skulkers who feign death and fail to move forward with the firing line or, impelling them to flee from danger, makes them press about a wounded comrade and accompany him to the rear. A German observer in Manchuria reports four well men carrying one wounded man, followed by two more well men as guards. (Fischer, page 158.)

Colonel Hoff reports ("Report of Military Observers," page

139): "I am told that * * * often the wounded were accompanied by other than company bearers, and in numbers in excess of the necessities of the case."

Von Verdy says (page 234): "The accompanying or transportation of the wounded to the dressing station by men who are able to fight must be forbidden under all circumstances as long as fighting is in progress; otherwise men would be too easily induced to withdraw from danger on such pretext. Not a single man able to bear arms can be spared before a decision is reached."

Colonel Havard, in his report on the Russo-Japanese War, mentions the depletion of the firing line by unwounded men carrying wounded to the rear (page 67).

Third—The danger of infection from an accumulation of sick and wounded. Hard marching, long-continued fighting, exposure to elements and reduced rations are incident to field service and have a direct effect in lowering the vital tone of the soldier and lessening his powers of resistance to disease. If to this condition there be added such a factor as was uniformly present in our camps during the Spanish War, viz., the retention of infectious cases, such as typhoid fever, not only within the camp limits, but frequently on regimental and company areas, where contact between the sick and healthy was not only certain but frequent, the development of grave epidemics was scarcely to be avoided. Had every ailing man promptly been placed on sick report, had every suspicious case of sickness been promptly segregated away from healthy comrades, and had cases of a demonstrated infectious nature and conditions been removed to a distance and condition under which dispersion of infectious germs to healthy persons would have been impossible, the sanitary history of the war with Spain would have been far more creditable to the army and country, and the effective strength of that army would have been increased to a great degree. This condition of affairs was due to a practice which the line officer must look for in all large camps. I refer to the practice of keeping infectious or even suspicious cases in the regimental hospitals. In the volunteer regiments the commanding officer and the surgeon frequently wished to keep their sick with them in their own regimental hospitals. This may have been because the sick man wanted to be among his friends or because of his political influence at home. But no matter what the reason, the result was bad. The diseased man simply spread the disease, and the regi-

mental hospital which the soldier considered "home" became a focus for disease.

About 0.9 per cent. of a command are usually considered as taken sick daily, and in large commands infectious and contagious diseases are never absent. To maintain efficiency these cases must be isolated—there is no place for them with the mobile army. Somewhere between 3 and 6 per cent. we must expect to have disabled from one cause or another even under ordinary conditions of service. But very few of these can be permitted to remain at the front—probably not over a third.

Fourth—The necessity for removing sick and wounded from a humanitarian standpoint.

While it may be said that the work of the medical department at the front is a matter of economics—the greatest good for the greatest number—and that considerations of humanity are secondary, yet there is, throughout the civilized world, a growing demand that war shall be conducted on humane lines, and this demand must be heeded.

What better can we do for the disabled themselves than to send the sick and wounded to the rear? The Red Cross and kindred organizations cannot be used at the front, but at the rear their services are invaluable; and here the sick and wounded, free from the discomforts of the mobile camp, far removed from its atmosphere of strenuousness, surrounded by quiet, comfort and conveniences, here they will recuperate.

And their removal to the rear will work a two-fold advantage. Not only will it free the hospitals at the front, but the recovery of the patients will be quicker and they will be returned to the front in a shorter time.

From a purely military point of view this latter is an important consideration and should alone cause a commander to get rid of sick and wounded.

Statistics of the Russo-Japanese War show that about one-third of the wounded never returned to the front within 30 days, and in these days of modern bullets and modern surgery we have some reason to believe that the percentage returned in a given time may increase.

Fifth—We may consider the evacuation of sick and wounded from the standpoint of the transportation involved.

If an army has a few thousand sick and wounded and attempts to move with them, it means the exclusive use for that purpose of hundreds of wagons, animals and men, possibly of

railroad trains, and the attendant congestion of roads and railroads.

A commander will do that only to make a change of base or to tide over a short interval during which he expects to gain a valuable strategic point and then to open up new lines of communication or to re-establish old ones.

SOLUTION OF THE PROBLEM.

The question now arises, how can we in time of peace prepare to solve these problems of war? And the answer is, in the same manner in which we prepare to solve any other problem of war, namely, by a study of methods used in past wars to evacuate wounded, by the war game, staff rides, sanitary-tactical map problems, problems in the maneuver camp.

In this subject the history of the Civil War is most enlightening. In May, 1862, we had no system for the care and evacuation of sick and wounded, and as a result of a report made by the surgeon-general to the Secretary of War (May 17, 1862), authority was given to the medical department to take charge of all the sick and wounded of the army. Previous to this, State agents and others were working, but under no control and with poor results. A system was then prepared, but it did not meet with the approval of General Halleck, General-in-Chief, and on September 7, 1862, the surgeon-general again wrote to the Secretary of War requesting that the care of the sick and wounded be given to the medical department, stating that on September 7, 1862 (seven days after the battle, Second Bull Run, August 30, 1862), 600 wounded still remained on the battlefield in consequence of an insufficiency of ambulances and the want of a proper system for regulating the removal of wounded, that many had died of starvation, exhaustion, etc.—all of which could have been avoided. It was not until the battle of Fredericksburg, in December, 1862, that the new system was tried and with excellent results. It was again tried in May, 1863. Then the medical director of the Sixth Corps, which took Marye's Heights, reported ("Medical and Surgical History of the War," part I. Medical Volume, page 138): "The charge was made at 1.00 P. M., the heights were taken and in less than half an hour we had over 800 wounded. Two hours after the engagement, such was the celerity and system with which the ambulances worked, the whole number of wounded were within the hospitals under care of nurses."

In every war since our Civil War the student of military his-

tory will find lessons in regard to the evacuation of the sick and wounded. In 1870 Von Verdy first wrote his "Studies in Troop Leading," and in it the importance of the service of evacuation was dwelt upon. In addition to the quotations previously cited there appears the following (page 335) :

"The first duty of a chief quartermaster of a division during an engagement is to provide sufficient wagons filled with straw for carrying wounded." And on page 336, a caution to use empty wagons to carry wounded on returning to their trains in the rear.

Von Schellendorf, in his "Duties of the General Staff" (page 540), states :

"The system of evacuating sick and wounded forms the basis of the entire medical service in the field."

Colonel Havard says ("Report of Military Observers in Manchuria," page 47) :

"The three most important duties of the medical department at the front are the collection of the wounded, the application of first aid and their transport to field hospitals."

In the *Military Surgeon* for December, 1909 (page 681), we find the following :

"We are therefore forced to the conclusion that the basis of the medical department for war is the military necessity of maintaining the highest effective strength of an army and of relieving it of the encumbrance of sick and wounded."

A MATTER OF ADMINISTRATION.

The work of the medical department in removing the sick and wounded is largely a problem of administration, the handling of the medical units, the bringing together of the wounded, medicine and surgeons. So well did the Russians and Japanese realize this fact that they placed line officers to perform medical-administrative duties.

Colonel Hoff (page 120) reports :

"This service of evacuation requires administration and execution like other military processes. For this reason Russians used line officers—their medical officers not having experience in administrative matters—only in purely medical work. General officers were assigned to sanitary work due to the responsibility, arduousness and military importance of this work."

And again (page 125) :

"Kuropatkin realized that medical officers must understand the military value of the medical corps and was about to require candidates for medical commissions to serve one year in the line."

Until recently Russian military hospitals were commanded by line officers. (Colonel Havard's report, page 56.)

In the Japanese Army each division had a sanitary company commanded by a major of the line or train and also a department for transporting patients commanded by a line or train officer. (Report of Military Observers, Major Lynch, pages 42, 123, 128.)

Major Lynch states (page 42) :

"Sanitary companies have a comparatively large number of line and train officers and soldiers. Their commanders and the commanders of their two litter companies usually come from the infantry, though sometimes they are taken from the train. The Japanese believe that a line officer, from his superior knowledge of tactics, will be better able to choose locations for dressing stations."

EXEMPLIFIED BY WAR GAMES AND STAFF RIDES.

The above shows how valuable the war game and the staff ride may be in teaching the military surgeon how to handle this administrative problem. In playing the war game, surgeons can become acquainted with the various duties of the different offices which they may hold in war by being detailed as chief surgeon of the division, commander of field hospital or ambulance company, regimental surgeon, etc. And they should be required to make their estimate of the medical situation, issue orders, move about and perform all the duties incident to the office. In this way army surgeons will become in fact, as well as name, military surgeons, and in time of war can perform those duties which the Russians and Japanese performed by line officers.

In this it must be borne in mind that efficiency in the case of sick and wounded cannot be obtained from a mere aggregation of doctors and hospital corps men. There must be system and discipline coupled with training in concerted action. To win a battle we must play the game, and every member of the team must do his part. Without team work there can be no victory, and the line officer must realize that the work of the medical department in an extended campaign, in maintaining the physical fitness of troops and in removing the crippling incubus of sick and wounded, is just as essential to victory as good marksmanship. Too often the medico-military efforts of surgeons to improve themselves to act as staff officers are ridiculed. On the contrary, they should be encouraged and greater efforts demanded. It is necessary for a military surgeon to be able to read maps, know rates of march, road spaces and tactical formations

in order to establish stations, evacuate wounded and play his part in the battle. And in time of peace the medical officer, like the line officer, must prepare for his duty in time of war. It is just as necessary for the surgeon to have practice in time of peace in handling his ambulance company or field hospital as it is for the line captain with his company, troop or battery. And what opportunity has our surgeon for this practice to-day? In the United States Army there is not a single ambulance company and not a single field hospital fully equipped or organized for war. Such medical units, which will surely be required in war, should be organized and maintained in time of peace as other organizations are.

The recent order publishing the composition of the First Field Army (General Orders No. 35, War Department, 1910) shows the woeful lack of medical units in our service.

Of a total of seven States, five have no sanitary representation nor has the Regular Army. The actual lack in different branches of the service is shown in the following:

Infantry	0
Cavalry	1/6
Field Artillery	4/9
Engineers	0
Ambulance Companies	11/12
Field Hospitals	11/12

NECESSITY FOR MUTUAL UNDERSTANDING OF EACH OTHER'S DUTIES

It has been stated that the medical officer must know something about tactical formations and the part played by the combatant troops in war, but it is just as necessary that the line officer should have a general idea of the part played by the medical department. In case of long-continued and heavy losses it is not impossible that every surgeon might be engaged day and night in purely surgical or medical duties, and the administrative work of controlling ambulance companies, civilian wagons and evacuating the wounded be temporarily performed by line officers.

This mutual knowledge of each other's duties can be admirably learned in war games, staff rides and at maneuvers. In fact, we might even go further and devote one maneuver during camp to a demonstration of the process of clearing the battlefield, establishing stations and evacuating wounded. Such a maneuver properly performed would be of inestimable value in teaching

both line and medical officers the magnitude of the task and the importance of this subject.

SANITARY-TACTICAL MAP PROBLEMS.

War games, staff rides and maneuvers require a group of officers working together, but such opportunity is not given to all, and to these the map problem affords a means of learning almost as good as the others.

The appended problem (Problem No. 2, Course in Troops in Campaign, Army School of the Line, 1909-10)* is one that was used for elementary instruction during the past year and shows very plainly the magnitude of the administration work. In the *Military Surgeon* for December, 1909, appears a sanitary-tactical problem translated from the Russian. The applicatory method of teaching this subject is typified in a work (now in press) entitled "A Study in Troop Leading and Management of the Sanitary Service in War," by Major Morrison, General Staff, and Major Munson, Medical Corps, United States Army.

CHARACTER OF THE PROBLEM

This problem of the evacuation of sick and wounded has no stereotyped form. It differs just as any tactical problem does, and each must be solved in accordance with the conditions and circumstances in which it is cast. The problem is affected by the character of wounds produced by the modern bullet, whether shell, shrapnel or small arms; by the ability of surgeons to-day to return to the firing line in a short time cases which in the past were considered beyond help; by the long range of modern fire-arms; by the character of the terrain as regards ease in finding wounded, cover from fire for first aid, dressing and ambulance stations, the presence of suitable sites for field hospitals; by the character of roads and their availability for removal of wounded; distance over which wounded must be littered and carried in vehicles; character and quantity of transportation available, especially if civilian teams obtained locally or civilian labor available, such as coolies for litter work; length of daylight or moonlight; use of trained dogs in searching for wounded; time of year; meteorological conditions; availability of buildings for use as dressing stations and field hospitals; duration of the engagement; numbers and classes of wounded; physical condition of troops and sanitary personnel before the engagement; numbers

*Omitted.

engaged; character of the battle, offensive or defensive; presence in sufficient numbers of sanitary personnel at the front or of Red Cross or volunteer aid associations at the rear; sufficiency of medical supplies where needed; whether troops of the line have made proper use of first-aid packets; whether surgeons have used diagnosis tags, etc., etc.

CONCLUSION.

Success in military operations is the common goal of the line officer and the medical officer. Without co-operation, success is unattainable. If the medical officer fails to play his part in removing the sick and wounded, and thereby ties the hands of his commander, the game is lost.



WHAT IS THE MOST APPROPRIATE ARMING OF MODERN CAVALRY?

WHAT METHOD OF CARRYING THESE WEAPONS ANSWERS THE BEST?*

BY FIRST LIEUTENANT HIRSCH VON STRONSTORFF, AUSTRO-
HUNGARIAN CAVALRY.

TRANSLATED FROM THE GERMAN BY MAJOR W. H. ALLAIRE, TWENTY-THIRD
INFANTRY, MILITARY ATTACHE



UNTIL quite recently many persons have wished to deny to the cavalry that importance in the modern war which has been conceded to it for many ages. The great progress in technical arts, especially in those of weapons, has, these persons say, given the death blow to the arm of chivalric memory.

The destructive fire of machine guns, repeating and quick-firing guns has so much surpassed every other kind of fighting that, they further believe, only arms which are of real service against this firing should have a *raison d'être*, and in those cases where the technical arts have not yet succeeded in replacing the horse by a mechanical means of locomotion, the gap will have to be filled by mounted infantry.

These same persons endeavored to prove and confirm all these ideas from ostensible experience in the last two wars, especially the Russo-Japanese War. Various circumstances which have been often discussed in able ways make the last-mentioned war not especially fit for the study of cavalry questions. But in no way can one draw the conclusion from it that the cavalry arm has become superfluous. On the contrary, the Japanese cavalry,

*This article appearing in the "Kavalleristische Monatshefte," Vienna, May 1910, was awarded the first prize by a commission of high-ranking cavalry officers, of which Archduke Karl Franz Joseph was the president.

being in spirit mounted infantry, little used to riding, without enthusiasm for the mounted service, with little confidence in the sabre or lance, and not well mounted, has in fact shown that the numerous tasks which may devolve upon modern cavalry have not been solved.

But we should not stand still!

The cavalry must recognize and utilize the progress of the times and adapt itself to the new exactions and phenomena placed before it. It must break away from petty prejudices and make the firearm its ally, but it must cherish and cultivate more than ever the good old cavalry spirit. When it works on such principles, and for these is armed and equipped, with sabre or carbine in hand, it will be able to solve many tasks with true cavalry boldness, dash and initiative.

Its arms must therefore be equally adapted to conduct the fight on horseback or on foot.

This last method of fighting is really not new. Indeed, Frederick the Great exacted fire action from his renowned cavalry, and Edelsheim made the same exactions and showed in a brilliant way the usefulness of fire action before an enemy.

Though, therefore, we acknowledge that fire action is equally important, yet the fighting with the sabre and lance will always remain the specific method of fighting of the cavalry.

Above all, in actions against cavalry, the preference will mostly be given to the latter method, because only in fighting on horseback a decided success can be hoped for when the action takes place under similar conditions.

For example, two approximately equally strong bodies of cavalry on reconnaissance work or other employment meet each other; a fight is inevitable as means for the fulfilment of their tasks. It is, however, not sufficient in all such cases to impede or ward the enemy off; he must be defeated, and not until then is a proper, profitable result assured.

In a fire action an initiative, sterling cavalry could not be deterred in its entirety from its object, much less could it be paralyzed. While a small part would fetter the dismounted opposing cavalry through fire action—and herein lies the advantage of the great fire effect of modern weapons—the principal part would be able to attend to its task quite undisturbed.

Not only against cavalry will such an attack with sabre in hand be the most proper and only method of fighting which promises success, but also against infantry and artillery it has

not lost its authorization, notwithstanding the efficiency of modern firearms. At an opportune moment, ridden with bold courage, it will succeed in its object much quicker and with much more striking effect than a long-drawn-out fire action.

Far more than half the infantry of modern armies consists of reservists and ersatz-reservists (supernumeraries) who lack manifoldly by their little target practice confidence in their firearms and whose moral worth is diminished by the great and unaccustomed fatigue. If we consider further the demoralizing and nerve-shaking effect of a long-drawn-out fire action, there is no doubt whatever that the cavalry, in spite of repeating rifles and machine guns, surprising and with a well-directed attack, will be able successfully to ride against infantry.

With the rapid gait, and on the other hand with the excitement of the riflemen, the encounter will be no light affair. Every hit does not incapacitate; horses especially show in this respect great resisting power. At Casablanca it was repeatedly noticed that horses, even with many wounds, galloped long distances, provided no vital organ or leg had been struck. Further, it was noticed that a gallant and rapidly-riding cavalry by the fire of infantry or artillery was not easily to be warded off, and mostly was able to break through to the goal; with that success was actually assured. It is, therefore, evident that also nowadays the cavalry charge against all arms will be used if quickness and vehemence of the attack are necessary to accomplish the purpose. In fighting on horseback the weapons are the sabre and lance. A great deal has already been written and contended as to the value of the two weapons, but no generally accepted opinion has been arrived at.

But because the consideration of this question belongs to the present subject, I shall endeavor to support my standpoint by the most important arguments. On account of lack of space I am forced to omit many interesting considerations.

To equip each cavalryman with both weapons I consider would be to overload him and would hamper rather than help him. To arm, however, only a fixed number of men with both sabre and lance, and the rest with the sabre alone, has sundry disadvantages about which I shall later make some remarks. I consider this solution not practicable, because I am convinced that time does not exist for the thorough training of the material we have for cavalymen in both weapons, especially as nowadays

the training in firing must not be neglected and requires a great deal of time.

History does not prove the absolute superiority of one of these weapons over the other. Though Montecuccoli called the lance the king of weapons, yet prominent army, and especially cavalry, leaders have very well understood how to win the day without it, and even against enemies that carried lances. They regarded this weapon at one time as superfluous when the cavalry was employed most exclusively in a tactical combat or in pursuit; occasions where the supporters of the lance claim the greatest advantage for it. I refer only to Gustavus Adolphus, Pappenheim, Charles the Twelfth, Prince Eugene, Marlborough, Seidlitz and Zieten. Likewise wars of more recent date give no cue to the solution of this question. But it is certain that a short cutting or thrusting weapon has always in the past been used by all cavalrymen.

In my opinion the lance possesses more disadvantages than advantages, and I believe, under the conditions of the present day, the sabre to be by far the more appropriate weapon, and considering the numerous tasks which modern cavalry has to discharge, the lance is really useless ballast. It inconveniences the rider in handling the bridle and causes a great and one-sided loading of the horse. It prevents the carrying of the carbine on the man's back and forces the carrying of the carbine on the saddle, which is unnatural. It may prematurely often betray its carrier, so that at each attack the supreme moment of surprise will be put in question. How does the lance prove itself as a weapon? It is said to make above all an especial moral impression. Possibly—but as soon as the mass of horsemen is set in motion the psychic moment no longer has any meaning. But a corps of officers well trained in cavalry traditions will probably always succeed in overcoming the difficulties of the preceding critical moment. The lance may be awarded some superiority for shock effect, although it requires much diligent and well-grounded instruction to teach the man to instinctively and safely handle this delicate weapon at the moment of contact.

Dexterity in handling the lance is inborn in the Slav races. It appears more natural for a German to strike, and for the races of Latin origin to stab, with a short weapon. At all events many pricks of the lance will miss their goals, many points will get entangled in the equipment of the enemy and bring to the carrier of the weapon great injury.

The much-boasted wall of bristling lances ("lanzenstarrende Mauer"), moreover, shows wide gaps where officers ride in front. And what is the condition of the second rank? In many countries the men of the second rank do not lower their lances in the attack; on the contrary, they themselves are exposed to danger, due to the small rank-distance, by the ends of the lances of the first rank sticking to the rear. If the second rank, as in Germany, also lowers the lance, the first rank is really endangered by this act. As a matter of fact, wounding really already happens even at drills in time of peace.

The sabre is much handier; it can be used equally by officer and private in both ranks in the attack, and the sure handling of which is in general more easy to learn. Since the lance must be held in the center of gravity, and its carrier cannot bend forward as strongly as a man with a sabre, so the effective length of the normal lance is fairly equal to that of the sabre with the outstretched arm and advanced shoulder. Specially long lances have, besides many other disadvantages, a great uncertainty in the thrusting. In addition, I do not believe that the wounds produced by the sabre cut or thrust are lighter than those given by the lance. At least there occurs above all the disabling for the moment. It is evident that during the hand-to-hand fighting following the shock the sabre is far superior to the lance. In this connection I wish to quote some remarks of Seidlitz: "In charging it is much the same whether the soldier has in his hand a lance, a sabre, a broadsword or a whip, if it happens that he be well mounted and carries in his heart the unflinching determination to run the enemy down with the breast of his horse. But in hand-to-hand fighting the sabre and broadsword are the sole useful weapons."

I had the opportunity once to attend at Saumur the exercises of the French cavalry officers at that school. Among other things the contention between sabre and lance riders was exemplified by a fight. Now, while one very skilful mounted lancer succeeded in holding his own against two mounted sabremen, the chances of six or more mounted sabremen against a like number of mounted lancemen in a closed front were certainly greater. Therefore, in Article 362 of the French Cavalry Regulations, the mounted lancemen are directed to hold themselves a fixed distance from each other. The regulations fail to show how this is to be carried out in a long attacking front.

Moreover, how many lances at the first shock become un-

serviceable or are lost? Before a sabre may be seized a great loss of time is required. Finally, how difficult does the supporting interference of a reserve armed with the lance turn out in a *mêlée*? There is the danger that friends as well as enemies may equally be injured. Only in the pursuit it has the advantage in that the fleeting enemy can in many cases be more easily reached by it. In this case it is supposed that the horse will be well managed and that the lance will be skilfully handled. On the other hand, essential disadvantages show themselves when a party of lancers are surprised by an attack on the flank or must itself attack in a column formation.

The advocates of the lance expect an especially good effect from it in an attack on infantry. To this I wish to reply that in such an attack the moral effect, caused by the rapidly advancing rider dispersing and riding down, produces the real effect and not in reality the arms. In hand-to-hand fighting it cannot, therefore, be effectively used against a thin firing line or advancing infantry. But what disadvantages the lance has when it cannot be used as a weapon! During fire action it makes quick mounting and dismounting difficult. Its keeping during this time causes the rider great care. For this purpose the lance, in addition to the sabre, if the latter also is carried, is either fastened to the saddle, or those remaining behind with the horses will be armed with two lances and thus rendered helpless. Moreover, in the latter case, the number of men available for fire action is reduced by one-half. What consequences may follow when the lances are laid on the ground by standing horses or together in stacks if an unexpected movement of the held horses becomes necessary? The sabre has none of these disadvantages, especially if from the outset it be carried on the horse. Moreover, the lance, by the mere activity of riding, means very often a troublesome adjunct in passing through woods and underbrush, over obstacles, through swamps and finally over every difficult terrain. It is particularly troublesome to patrols and orderlies who in the fulfilment of their tasks are not able to choose the most convenient route, but are forced to advance covered and at a distance from communications. Often at the German maneuvers I had the opportunity to observe single riders who, hindered by the lance, needed a particular skill if something made the horse unruly.

But should only a part of the men be armed with the lance, the uniformity of employment and training of the men would

suffer. Certainly the most skilful riders and the men physically the most active would be selected to carry the lance, so that exactly these could not be selected for reconnaissance and security work nor for orderly service. Finally a great advantage of the sabre is that it does not become unserviceable as quickly as the lance, which must be handled much more carefully. Not only in a fight, but also in falls from the horse and on other occasions, it may be easily twisted or broken. This consideration would make it necessary to carry a great number of extra ones. But every increase of the baggage of the cavalry must be regarded as an important disadvantage.

Every modern cavalry must therefore be armed for fighting on horseback, with a handy sabre which is as well adapted for thrusting as for cutting. It must be made of the very best material in order to reduce its weight consistent with the greatest possible durability. Hence the resulting advantages are twofold:

1. The total weight carried by the horse is diminished.
2. Each man is able to use his sabre more safely and persistently even during the fastest gait.

However, a great number of cases might arise, as mentioned before, where fighting on horseback would not succeed, but when fire action would. With the knowledge that a modern cavalry must be able independently to carry through a fire action to its end, the number of these tasks has considerably risen and the range of the duties of the cavalry has correspondingly increased. The greater the requirements, the greater the honor. But if the cavalry decides to fight by fire action, it must learn to do so in the best way and insure the greatest chance for success through its firearm. Half measures are always hurtful, and through such the cavalry will attain not only no success, but suffer severe and unjustified losses. For successful fighting with the carbine appropriate clothing and equipment are necessary. But the consideration of this question would go beyond the bounds of this article. I mention them only as a condition *sine qua non*. It might add to the interest to know that Napoleon demanded for his cavalry a uniform of the greatest possible similarity to that of the infantry.

The emphasis laid upon the great importance of fire action and the desire to make it as perfect as possible by a suitable firearm, however, need not cause the fear that thereby the cavalry will be degraded to mounted infantry. On the contrary, only as the cavalry arm it is in a position to discharge the tasks as-

signed it, and alone through the utilization of its mobility and quickness, the most characteristic qualities of the cavalry, it furnishes the basis of success. In conducting one of the most important of services, that of reconnoitering, it will happen more often now than formerly that a line of obstacles or a concealed line occupied by advanced infantry, dismounted cavalry or bicyclermen must be broken through. The cause for this lies in the desire increased nowadays to prevent the enemy from getting an insight into one's own provisions, and in the considerably larger repelling power of even small hostile parties in consequence of the increase fire effect of small arms. In such cases the cavalry must in itself enjoy the possibility to bring about a decision through a fire action offensively carried forward to the lines of the enemy. Only then can it pass on to its own activity of getting information.

But also in reconnaissance work—in future wars—valuable and reliable data are to be obtained very often only through fighting. Detachments, yes, patrols, will themselves often be forced to fight with the carbine for each position or point from which they may make good observations. Since, however, it is a fact that a stubborn enemy cannot be shot out of his position, the opposing party must proceed to assault it. From this it appears we must reckon with the above facts, consequences of the far-reaching and powerful fire of modern firearms, and make all necessary provisions to overcome them.

Through its speed the cavalry is especially fitted to reach quickly important positions and hold them until the arrival of the other arms. In such cases it may be necessary to fight through to its last phase a defensive fire action. From the great extension of the front of to-day it may happen that a part of the firing line must alone ward off even a bayonet charge of the enemy without the rest of the position becoming untenable.

A modern cavalry should not, during a battle, look on inactive at the fight of the other two arms in order only to interfere after the day is carried by pursuing the enemy or following sustained defeat by sacrificing itself. Again, by virtue of its own mobility, it alone is able quickly and with surprise to act in order essentially to contribute to a favorable ending by a fire action offensively carried on with cavalry snap, or in order to support a tottering firing line.

In pursuing or in warding off a pursuit, particularly in difficult and very broken country, a modern cavalry will frequently

be able alone, through the use of fire action—be it by way of offensive or defensive—to truly fulfil demands placed upon it.

And finally in a raid, for which the cavalry is so well adapted, how often will it be necessary to resort to the carbine in order to reach the coveted goal! In such undertakings it may even repeatedly happen that one is forced to proceed to assault defended towns or field works. Examples of such fighting are to be found as early as in the war of 1870-71.*

We see therefore that opportunities offer themselves in every employment of the cavalry where fire action is imperatively necessary. But it is not sufficient—as was above pointed out—merely to commence fighting with firearms; very often, be it offensive or defensive, it must be fought through to a termination, and only with hand-to-hand fighting may it find its end. Furthermore, it is to be considered that the enemy in this fight will frequently be infantry. To arm for fire action must carry weight from these facts. Through this a modern cavalry will enjoy the possibility also of succeeding against infantry. The training therefore for fire fighting with an earnest will and honest work in time of peace will be to reach this highest goal. We must not forget that by far the greater part of the cavalry in the field consists of men constantly under training, and only a small part of their marksmen are reservists, and the latter will always be men who were in active service only a year or two before, while the infantry consists in great part of ersatz-reservists (supernumeraries) little trained in skirmish work on the firing line.

At maneuvers when firing occurs in the distance and it is discovered, from the striking uniform seen, that it comes from cavalry, this firing is regarded by the umpires and opposing forces as of little importance, because it comes only from cavalry. But this should not discourage the cavalry, but should induce it to give up its striking uniform and other articles of accoutrement visible at long distances. The firearm of modern cavalry must in every way be equal to that of the infantry, and especially permitting good hitting results at long distances. The length of the barrel must be such that the propelling force of the powder is fully utilized, whereby the initial velocity of the bullet is increased. Of course, the firearm must also be made of the best material in order to save as much as possible in weight. The number of cartridges a rider must carry must be from eighty to a hundred. The replenishing of ammunition is much more diffi-

*Also in the Civil War 1864-5.—[ED.]

cult than with the infantry. When the cavalry moves rapidly it will not be able to have daily access to the heavy ammunition columns. Particularly when operating in front of an army the train will evidently often have to remain far behind. It will therefore be necessary to have ammunition pack-horses, which by appropriate packing and loading will be able to follow all movements of the cavalry, because exactly with this arm occasions will often arise to fire away in a short time a great amount of ammunition, and perhaps this may happen several times in a day. Any reduction in the weight of the cartridge—somewhat as at present in France and Germany—is of the very greatest importance in the cavalry arm.

As repeatedly pointed out before, modern cavalry must also be in a position to fight a fire action from the beginning to the end. The experiences of the last wars taught that by fire action alone a position can neither be taken nor defended without hand-to-hand fighting being resorted to.

How can we demand of anyone an irresistible forward impulse, even to storming a hostile position or cold-bloodedly holding on to his own position up to hand-to-hand fighting, if we do not arm him properly, that is, provide him with a bayonet. And even in those many cases where we may earlier break off an engagement, the consciousness of being equipped for the last phases of a battle is of priceless moral worth.

The bayonet offers very essential advantages in assaults and in surprise attacks on the enemy, as well as in night operations. I think a light dagger-bayonet weighing about 300 grams, and which can be turned down and is permanently attached to the carbine, the most appropriate. It should be two-edged, and when turned down almost entirely disappear in the stock. As historical evidence for the necessity of this weapon, I cite that the Cossacks in the last war urgently demanded a bayonet, although they wore the *schaschka*, or scimitar, while fighting on foot, hung over the shoulder.

I therefore sum up that in my opinion a modern cavalry should be armed for fire action with a standard carbine having a dagger-bayonet; it must further be supplied with a large amount of ammunition, ammunition pack-horses and a light ammunition column. The increased weight due to providing a bayonet and a greater number of cartridges must be compensated for by the omission of small, less important things of the kit, or by making the same of lighter weight.

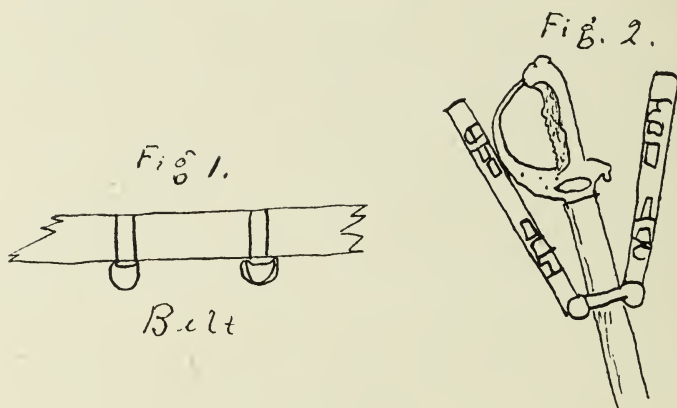
Proceeding to the second part of this theme, I lay down two principles as to the method of carrying these separate weapons:

1. The soldier must be so equipped that he will under all circumstances carry with him one weapon.

2. The sabre belongs as a maxim to the horse, the carbine to the man.

From these two propositions it follows that the cavalry enlisted man carries the sabre only when he has not the carbine on his back; for example, in time of peace, off duty, as a prerogative of his profession.

The sabre belt in its present form must be abolished. I propose that, when the sabre is carried by the man, this should be done by means of the belt, which is provided with two rings



(Fig. 1). The sabre is fastened by two straps, which on the one hand are to be buckled in the rings on the scabbard, on the other hand in the before-mentioned rings on the belt (Fig. 2). As soon as the man slings the carbine over his shoulder the sabre is fastened on the saddle; for this purpose it is put, with the hilt in front, into a leather case, sewed on the inner side of the left saddle bag. (In Austria there are two saddle bags, one on either side of the pommel—*Remark of translator.*) The sabre in the scabbard is pushed down into this case until the rings on the scabbard (Fig. 2) reach the tin-lined top of this case. The sabre is further made more stable by buckling the straps of the scabbard to others on the saddle. The length of this leather case is equal to the height of the saddle bag.

This method of carrying the sabre has the following advantages over that of carrying it slung from a belt on the man:

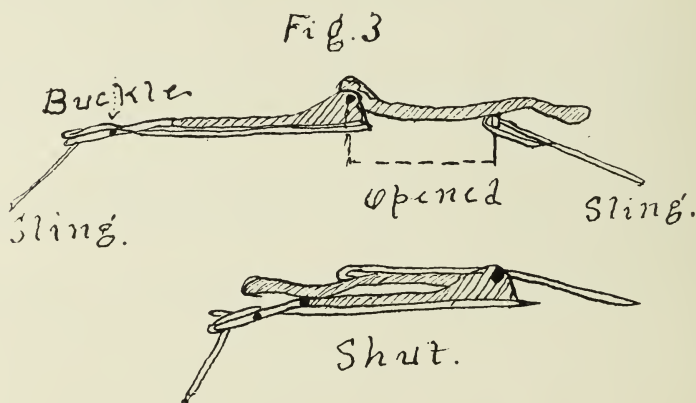
- a. The sheathing and unsheathing the sabre is easier.
- b. The swinging of the sabre, which is now very troublesome to both rider and horse, especially at the gallop, and causes considerable noise, will no longer happen.
- c. The taking off and putting on of the sabre before and after a fire action is no longer necessary. This means a saving of time of great value on such occasions. This operation takes much time, especially when the soldier wears the overcoat. If the sabre, however, remains on the man, it hinders him in walking and running, in crawling forward and lying on the firing line.
- d. The sabre fastened thus on the saddle is no obstacle for the cavalry passing through woods, underbrush and corn fields.
- e. It is impossible to lose the sabre in consequence of breaking the sabre belt.
- f. In falling from the horse there is no danger from the sabre for the rider.
- g. The uniforms are saved the constant rubbing of the sabre.
- h. Finally, the scabbard, which need not now be so strong, may be made lighter, and thus a reduction in weight will be effected.

Since the sabre is parallel to the shoulder of the horse and immovable, it hinders the horse in no movement nor in overcoming obstacles.

The man carries the carbine with dagger-bayonet on the back, slung over the left shoulder. This method of carrying has the great advantage that the man, when he is separated from his horse, has always with him the weapons proper for fighting on foot. Further it means an essential reduction in weight over the method of carrying the carbine on the saddle, as all the devices for fastening it must be bulky and heavy.

The principal advantage is that the man in dismounting for fire action is able to run into the firing line without the least loss of time. As the dismounting always occurs at some distance from the firing line, there is always time enough for the man to take the carbine from his back, provided the slinging of the carbine is simple. The speedy readjusting of the carbine on the back before remounting is particularly important when it is necessary to suddenly break off the fire action. Therefore, it is very important that the taking of the carbine off the back and returning it be made as simple as possible. I attach a particular value to this, that the sling of the carbine shall be one unbroken piece, so that in case of extreme necessity it is sufficient to simply throw

it over the shoulder. As, however, as a rule, there will be a time of some seconds for remounting, it must be made possible by an easy manipulation to so shorten the sling that the carbine is properly adjusted on the back. The perfect and quiet lying of the carbine on the back is best obtained by the use of the particular carbine leather loop employed in Austria-Hungary. (The loop referred to here is permanently on the back of the cartridge belt through which the butt of the piece is passed down to the small of the stock—*Remark of translator.*) The carbine is adjusted in this loop only when circumstances permit it. I cannot accept the proposal that a third strap fastened on the carbine should fix the latter in its position, as this arrangement, if it obtains its object, would cause pressure on the breast, and because the principal gun-sling is open and must be closed by buckling. How



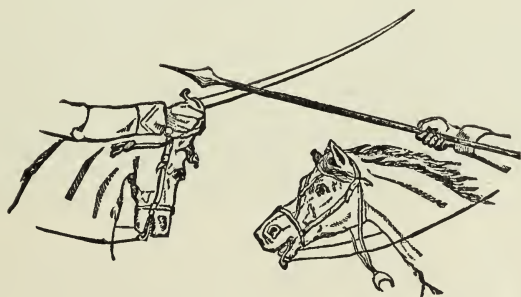
troublesome, however, to bring the two ends together and then to buckle them! The carbine-sling snap devised by me is in harmony with my ideas on this matter (Fig. 3).

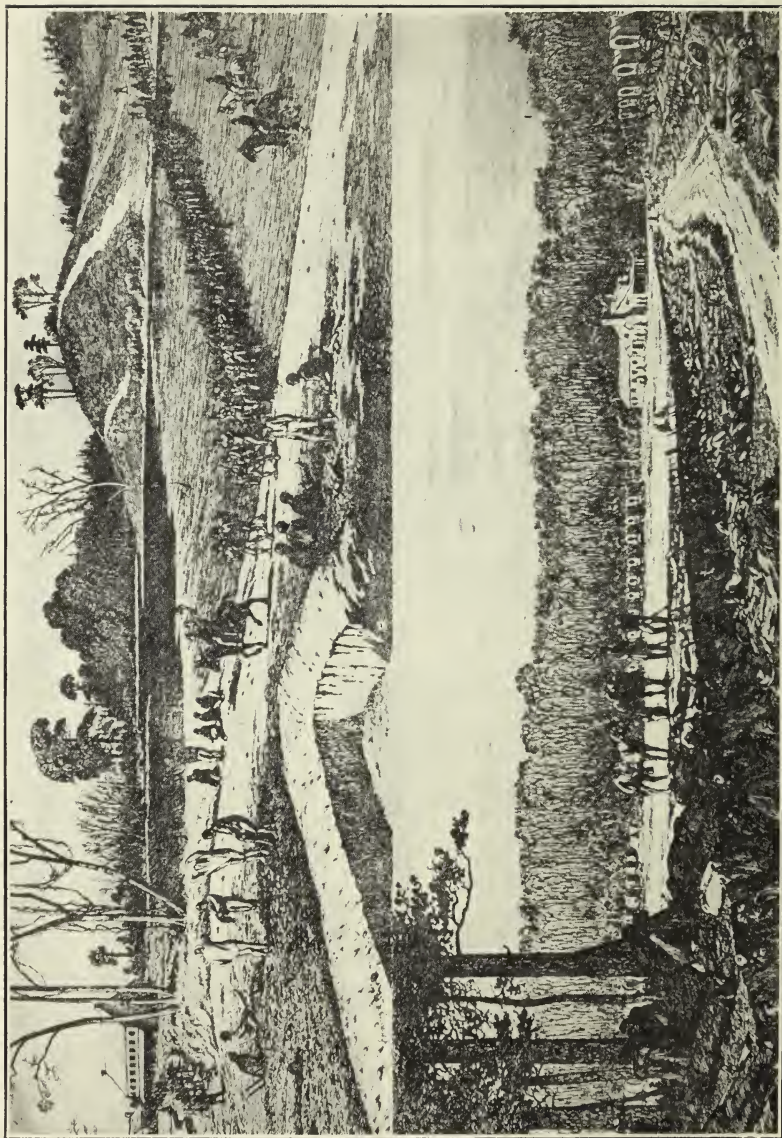
In order to be able to take down the carbine as it is now slung by us, it is sufficient to lengthen the carbine sling by from about 7 to 9 centimetres, while in readjusting it, it must be shortened to the same amount; but to be quite certain, I allow 14 centimetres for these adjustments. From the drawing it may be seen how, by opening and closing the lever of the sling, the latter by a single movement can be lengthened and shortened by the above amount. The device possesses great strength, is simple and absolutely reliable. The carbine is sufficiently fastened by the snap; but in order to effect a perfectly steady position at any gait, an opportunity may be taken later to slip the butt of the piece

through the loop on the back of the belt. Our present carbine sling may be used in connection with this device; of course, a change in the adjustment of the length of the sling is necessary for each man, and when the overcoat is worn this may be easily effected by the use of the existing buckles; but as soon as once the sling is adjusted, the buckles are not used further.

Having the bayonet permanently attached to the firearm has a series of advantages: The number of pieces is not increased; the weight is always the same, and therefore also the conditions for firing; finally, the bayonet may be used as a support of the rifle by opening it only 90 degrees. Experience in war has taught that it is necessary that the man has accessible the greatest possible number of cartridges. I suggest the following distribution: Thirty cartridges in a soft pouch with three separate covers on the front part of the belt; twenty rounds likewise in a soft leather bag with two covers; this is buckled to the belt by means of straps to the two rings mentioned by me above as soon as the man fixes the sabre on the saddle and slings the carbine on his back. In order to balance the weight, twenty cartridges are put in each of the two cartridge bags under the covers of the saddle bags. Cartridges to the number of ninety will therefore be in reach, which will be sufficient if cartridge pack-horses are with the command.

If modern cavalry will maintain its old position, it must adapt itself, as do the other arms, to the progress and demands of the time in regard to equipment, arms and methods of fighting. It must not be shaken in its spirit, its love of the horse and its enjoyment for the noble sport of riding in its inherent superiority; but undeviatingly true to inherited traditions, it must, in whatever uniform or with whatever weapon, know how to win the fight or to die.





Edwin Forbes.

CHANCELLORSVILLE—CROSSING THE RAPPAHANNOCK.



FORD NEAR PALMOUTH.

CHANCELLORSVILLE—CAVALRY OPERATIONS.*

BY MAJOR JOHN BIGELOW, JR., U. S. A.



H OOKER'S cavalry prepared for active service in accordance with the following instructions of the 11th of April.

I. The effective force of this corps will be in readiness to move at daylight on Monday, April 13.

II. Each trooper will carry on his horse not less than three-days' rations for himself and horse, and as much more as shall be judged practicable for him to take on short marches; and he will carry as much ammunition for the arms he bears as he can conveniently on his person, the amount not to be less in any case than 40 rounds of carbine and 20 rounds of pistol cartridge.

III. The pack-trains will be loaded with five-days' rations for the men. The supply-train will be loaded with rations of grain and subsistence in such proportion that men and animals will be supplied to the same date.

IV. The headquarters of the corps will be designated at night during the campaign, either in bivouac or on the march, by a red lantern.¹

Instructions for the employment of the cavalry corps were

*From advance sheets of "The Chancellorsville Campaign," a volume now in press. (Maps referred to are omitted.)

¹ From *Everglade to Canon with the 2 Dragoons*, by T. F. Rodenbough, Colonel and Brevet Brigadier-General, pp. 530, 531; and *W. R.*, 40, p. 198.

issued to General Stoneman on the 12th in the form of the following discursive letter from Williams, Adjutant-General:

* * * you will march at 7 A. M. on the 13th instant, with all your available force, except one brigade, for the purpose of turning the enemy's position on his left, and of throwing your command between him and Richmond, and isolating him from his supplies, checking his retreat, and inflicting on him every possible injury which will tend to his discomfiture and defeat. To accomplish this, the general suggests that you ascend the Rappahannock by the different routes, keeping well out of the view of the enemy, and throwing out well to the front and flank small parties to mask your movement and to cut off all communications with the enemy by the people in their interests, living on this side of the river. To divert suspicion it may not be amiss to have word given out that you are in pursuit of [W. E.] Jones' guerillas, as they are operating extensively in the Shenandoah Valley, in the direction of Winchester.

He further suggests that you select for your place of crossing the Rappahannock some point to the west of the Orange and Alexandria Railroad, which can only be determined by the circumstances as they are found on the arrival of your advance. In the vicinity of Culpeper you will be likely to come against Fitzhugh Lee's brigade of cavalry, consisting of about 2000 men, which it is expected that you will be able to disperse and destroy without delay to your advance or detriment to any considerable number of your command.

At Gordonsville the enemy had [has] a small provost guard of infantry, which it is expected you will destroy, if it can be done without delaying your forward movement. From there it is expected that you will be able to push forward to the Aquia and Richmond Railroad, somewhere in the vicinity of Saxton's [Hanover] Junction, destroying along your whole route the railroad bridges, trains, cars, depots of provisions, lines of telegraph communication, etc. The general directs that you go prepared with all the means necessary to accomplish this work effectually. As the line of the railroad from Aquia to Richmond presents the shortest one for the enemy to retire on, it is more than probable that the enemy may avail himself of it and the usually traveled highways on each side of it for this purpose, in which event you will select the strongest positions, such as banks of streams, commanding heights, etc., in order to check or prevent it, and, if unsuccessful, you will fall upon his flank, attack his artillery and trains, and harass and delay him until he is exhausted and out of supplies. Moments of delay will be hours and days to the army in pursuit. If the enemy should retire by Culpeper and Gordonsville, you will endeavor to hold your force in his front, and harass him night and day on the march and in camp unceasingly. If you can not cut off from his columns large slices, the general desires that you will not fail to take small ones. Let your watchword be fight, fight, fight, bearing in mind that time is as valuable to the general as the rebel carcasses. It is not in the power of the rebels to oppose you with more than 5000 sabers, and those badly mounted, and—after they leave Culpeper—without forage or rations; keep them from Richmond, and, sooner or later, they must fall in our hands.

The general desires you to understand that he considers the primary object of your movement the cutting of the enemy's connections with Richmond by the Fredericksburg route, checking his retreat over those lines, and he wishes to make everything subservient to that object. He desires that you keep yourself informed of the enemy's whereabouts

and attack him wherever you find him. If, in your operations, any opportunity should present itself for you to detach a force to Charlottesville, which is almost unguarded, and destroy the depot of supplies said to be there, or along the Aquia Railroad in the direction of Richmond, to destroy the bridges, etc., or the crossing of the Pamunkey in the direction of West Point, destroying the ferries, felling trees to prevent or check the crossing, they will all greatly contribute to our complete success. You may rely upon the general being in connection with you before your supplies are exhausted. Let him hear from you as often as necessary and practicable.

A brigade of infantry will march to-morrow morning at 8 o'clock for Kelley's Ford, with one battery and a regiment to the United States and Banks' Fords, to threaten and hold those places.

It devolves upon you, general, to take the initiative in the forward movement of this grand army, and on you and your noble command must depend in a great measure the extent and brilliancy of our success. Bear in mind that celerity, audacity and resolution are everything in war, and especially is it the case with the command you have and the enterprise upon which you are about to embark.

The gist of all this is that the cavalry corps is to cross the Rappahannock above the railroad bridge, and operate against the communications and resources of the enemy, and against his marching columns. The instructions relative to the latter are based upon the expectation that the enemy will retreat as Stoneman proceeds with the destruction of the Richmond, Fredericksburg and Potomac Railroad, and will direct his march either toward Richmond or toward Gordonsville. If toward Richmond, Stoneman will be in a position to oppose him in front; if toward Gordonsville, he is, if possible, to place himself across the enemy's front, and if not, to hang on his flank and rear. While in respect to time the work of demolition is expected to precede the operation of interception, in respect to importance demolition is subordinated to interception. "Keep them from Richmond," said Hooker, "and sooner or later they must fall in our hands." How was a cavalry corps that should not have been expected to muster more than 10,000 effectives to keep an army estimated at from 60,000 to 80,000 men from going where it chose to; and how was keeping the enemy from Richmond to make him fall into the hands of the Army of the Potomac? Hooker may have had answers to these questions, but it is hard to believe that, if he had, he would not have given expression to them.

Should Lee not retreat, Stoneman's operations would be a blow in the air or, at best, an effective raid.

The only provision made for communication between Stoneman and Hooker was the injunction: "Let him [Hooker] hear from you as often as necessary and practicable." What if it

should not be practicable for Stoneman to get a message to Hooker? In that case he could not expect to be in communication with the latter until the army and the cavalry were reunited. "You may rely," says the letter, "upon the general being *in connection* with you before your supplies are exhausted." How soon was this to be? The order did not prescribe the amount of supplies to be carried. Stoneman's circular required the pack-trains to be loaded with five-days' rations and each trooper to carry on his horse not less than three-days' rations and "as much more as shall be judged practicable for him to take on short marches." It also provided that the animals should be rationed to the same date as the men. The expedition may therefore be considered as supplied for a period of from eight to ten days—a long time to be possibly without news or instructions from army headquarters.

Neither Hooker's order nor Stoneman's circular makes any reference to subsisting off the country. Stoneman was to decide for himself whether he should fraction his command or keep it united.

The following force of cavalry was to remain with the army: Of the First Division—the commanding general (Pleasanton), the 2d brigade (Devin), and the battery (Martin). Of the Third Division—the 1 Pa. of the 2d brigade.

As diminished by the deduction of this force and the dismounted men, the cavalry corps marched on the 13th to Morrisville (21 miles). It numbered 9895 cavalymen and 22 guns manned by 427 artillerymen:²

CAVALRY CORPS—Stoneman.

First Division, 1st brigade (8 Ill., 3 Ind., 8 and 9 N. Y.)—Davis.

Second Division—Averell.

1st brigade (1 Mass., 4 N. Y., 6 O., 1 R. I.)—Sargent.

2d brigade (3, 4 and 16 Pa.)—McIntosh.

Battery A, 2 U. S. (horse artillery)—Tidball.

Third Division—Gregg.

1st brigade (1 Me., 2 and 10 N. Y.)—Kilpatrick.

2d brigade (12 Ill., 1 Md., 1 N. J.)—Wyndham.

Reserve Brigade (1, 2, 5, and 6 U. S.)—Buford.

Reserve Regiment (6 Pa. Lancers)—Rush.

Corps Artillery (horse)—Robertson.

Battery B and L,³ 2 U. S.—Vincent.

Battery M, 2 U. S.—Clark.

Battery E, 4 U. S.—Elder.

The command had with it six days' rations and five days'

² *W. R.*, 39, p. 1067.

³ Formed by the consolidation of two depleted batteries.

short forage, carried on the horses or on pack-mules or in a wagon-train, which was to accompany the column during the first two days. An extra supply-train of 275 wagons, carrying three days' rations and three days' short forage, was sent by the chief quartermaster of the army (Lieutenant-Colonel Ingalls) to Bealeton. The command was thus provided with nine days' subsistence and eight days' short forage.

The only force available to oppose it was four regiments of W. H. F. Lee's cavalry brigade⁴ and a portion of Stuart's horse artillery. The former numbered about 1200 men. The latter consisted probably of two batteries, or eight pieces, manned by about 150 men. This force was assembled about Culpeper Court House, with outposts along the Rappahannock. Fitzhugh Lee's brigade (1, 2, 3 and 4 Va.), with perhaps a battery of horse artillery, was at Sperryville (Map 1, sheet A). It numbered about 1000 sabers. Of Stuart's remaining battery one or two pieces were probably with the 15 Va. Cavalry below Fredericksburg, and the others detached between the Rapidan and the Virginia Central Railroad.

For the concealment and protection of the Federal movement, infantry was ordered to take post as intimated to Stoneman—the 91 Pa. (1. 3. V) at Bank's Ford, and Buschbeck's brigade ($\frac{1}{2}$ X J) at Kelley's Ford, each with instructions to prevent a crossing by the enemy or any communication across the river, and to keep as far as practicable from being seen.⁵

Stoneman issued the following order (Map 6) :

* Three⁶ squadrons of Davis' brigade will cross the North Fork of the Rappahannock at Sulphur Springs about 12 o'clock to-night [13th], and follow down the south bank of this fork, and clear out any enemy's force met with between the point of crossing and Freeman's Ford, at which point Colonel Davis will be with the head of his brigade. As soon as Colonel Davis opens up communication with these three squadrons, he will cross with the whole of his brigade, and turn Beverly Ford, where General Averell will be with the head of his division.

General Averell will cross with his division at Beverly Ford, followed by General Gregg with his division. General Buford, with his Reserve Brigade, will cross at the ford in the vicinity of the Rappahannock railroad bridge simultaneously with General Averell. As soon as General Averell and General Buford are across the river and both have formed their commands a short distance beyond the river, Averell

⁴ 2 N. Ca., 5, 9, and 13 Va. The 10 and 15 Va. of this brigade were detached; the former was near Beaver Dam, on the Virginia Central Railroad, and the latter on the Lower Rappahannock below Fredericksburg.

⁵ *W. R.*, 40, p. 202.

⁶ In the official publication this word reads *the*; it should evidently read *three*. I. B., Jr.

Map of a Portion of the Upper Rappahannock, 1863

----- Federal Troops
 — Confederate Troops

Scale
 1 2 3 4 5 6 Miles



will push on to Culpeper Court House, keeping to the right of the railroad, if possible to transport his artillery, or if there is no road leading along the right and near the railroad, then by the nearest road. Gregg will cross the river as soon after Averell as possible, and follow him well closed up on his rear.

If there should be a route practicable for artillery, and running parallel to the route pursued by Averell, Buford will follow it, provided it does not lead too far to the left. If there is no such route, the artillery of Buford will be sent to the rear of Gregg, and the Reserve Brigade will march through the country, irrespective of roads, keeping at such distance from Averell as to give room for Averell to form his division front into line of battle. Averell will move on in the direction of the enemy, who is supposed to be a mile or so this side of Culpeper Court House. In case Averell comes upon the enemy, Gregg will form his division at once, and hold it in readiness to move to the right of Averell's division, and Buford will act looking to the left, and Davis will endeavor to turn the enemy's left flank. If the enemy is encountered he will be attacked at once and with the utmost vigor, pouring in upon him every available man, excepting a limited reserve in each command.

Colonel Rush, commanding Lancers [6 Pa.], will report in person at daylight, April 15, to these headquarters, for special service.

The major-general commanding expects to be kept informed of all that may be deemed by commanding officers as important, and commanding officers will keep themselves posted as to what is transpiring on their right and left.

Corps headquarters will be, after to-night, with headquarters Gregg's division, until further orders.

The night of the 13th was quite cold. In spite of the heavy frost, Stoneman's cavalry bivouacked without fires, and consequently without sleep.

The following communication was addressed to-day (13th) to the commander of the XII Corps, and one of the same tenor to the commanders of the III Corps:

A large portion of General Stoneman's cavalry force have gone in the direction of the Shenandoah Valley, and will be absent some days. Your infantry pickets must be vigilant and strong, as they will have no cavalry force of any account to rely upon.

It does not appear whether this dispatch was intended to be intercepted, but seems well adapted to deceive in case it should be. However this may have been, W. H. F. Lee, near Culpeper Court House, received information in the course of the night from Lieutenant Payne—commanding the famous company of the 4 Va. Cavalry, known as the Black Horse Cavalry—that the Federal cavalry and artillery, in heavy force, were moving up from Fredericksburg in the direction of Kelley's Ford.⁷ Lee reënforced the picket at the ford with a company of sharpshooters and awaited developments.

⁷ *W. R.*, 39, p. 85.

The Federal movements for effecting a passage were then in progress. Davis took up the march for Sulphur Springs at 11 P. M., and marched on through the night. Buschbeck not having come up, Buford was sent with his brigade and a battery of horse artillery to Kelley's Ford, where he was to make a demonstration in the morning as a diversion in favor of Davis. It was contemplated that the 14th would be consumed by the movement of Davis' brigade down the river, and that the crossing of the remainder of the corps and the pack-train would take place on the morning of the 15th.

On the 14th, a clear, fine day, the cavalry proceeded to Bealeton, on the Orange and Alexandria Railroad, about 6 miles from Morrisville (Map 6). Here its wagons were unloaded and sent back to Morrisville. At daylight General Buford made a demonstration, as ordered, at Kelley's Ford, which had the desired effect of drawing the greater part of W. H. F. Lee's brigade from Culpeper to Kelley's Ford. Davis crossed the river at Sulphur Springs and Freeman's Ford, and marched for Beverly Ford. His brigade numbered about 1500 men. To avoid unnecessary delay in crossing the river, an attempt was made to-day to force it without the coöperation of Davis' brigade. Gregg's division went to the Rappahannock Bridge, leaving Averell's division and the artillery at Bealeton. The position at the river was examined, and it was found that a small body of the enemy was strongly posted on the opposite side to dispute the crossing, a part at the far end of the bridge, the remainder in a blockhouse and a line of rifle-pits beyond the bridge. While two companies forded the river below the bridge under a sharp fire, three companies charged across the bridge, and after a slight skirmish with the men in the blockhouse and line of rifle-pits, went back across the river. Gregg then examined Beverly Ford, and finding the south bank occupied by dismounted men, posted two squadrons opposite them on the north bank, and went into camp between Bealeton and Rappahannock Station.

A determined effort on the part of General Gregg's command could not have failed to secure the passage of his division at the railroad and at Beverly Ford; and success at these points would have caused the withdrawal of the Confederates at Kelley's Ford.⁸

* * * * *

⁸ *Campaigns of Stuart's Cavalry*, by McClellan, p. 222. See also *History of the 10th Regiment of Cavalry, N. Y. State Volunteers*, by N. D. Preston, pp. 68, 69.

The following communications went to Stoneman on the 15th:

From Hooker's Chief of Staff.

* * * The tenor of your dispatches might indicate that you were maneuvering your whole force against the command of Fitz Lee, numbering not over 2,000 men. The commanding general does not expect, nor do your instructions indicate, that you are to act from any base or depot. * * *

From Hooker's Adjutant-General.

* * * As you state in your communication of yesterday that you would be over the river with your command at daylight this morning, it was so communicated to Washington, and it was hoped that the crossing had been made in advance of the rise in the river. If your artillery is your only hindrance to your advance, the major-general commanding directs that you order it to return, and proceed to the execution of your orders without it. It is but reasonable to suppose that if you can not make use of that arm of the service, the enemy can not. If it is practicable to carry into execution the general instructions communicated to you on the 12th instant, the major-general commanding expects you to make use of such means as will, in your opinion, enable you to accomplish them, and that as speedily as possible. This army is now awaiting your movement. I am directed to add that, in view of the swollen condition of the streams, it is not probable, in the event of your being able to advance, that you will be troubled by the infantry of the enemy.

Regarding Stoneman's movements Hooker telegraphed to President Lincoln at 8 P. M.:

Just heard from General Stoneman. His artillery has been brought to a halt by the mud, one division only having crossed the river.⁹ If practicable, he will proceed without it. All the streams are swimming.

He received the following reply, same date; (the original, in the President's handwriting, is preserved in the Museum of the Military Service Institution):

It is now 10.15 P. M. An hour ago I received your letter of this morning, and a few moments later your dispatch of this evening. The latter gives me considerable uneasiness. The rain and mud, of course, were to be calculated upon. General S. is not moving rapidly enough to make the expedition come to anything. He has now been out three days, two of which were unusually fair weather, and all three without hindrance from the enemy, and yet he is not 25 miles from where he started. To reach his point [on the Richmond and Fredericksburg Railroad] he still has 60 miles to go, another river (the Rapidan) to cross, and will be hindered by the enemy. By arithmetic, how many days will it take him to do it? I do not know that any better can be done, but I greatly fear it is another failure already. Write me often; I am very anxious.

Even had Gregg's division remained across, and cleared the south bank of the river, Stoneman could not have begun a gen-

⁹ The troops that crossed were Gregg's division and Davis' brigade. J. B., Jr.

eral movement until about midnight, as it took until then to get the wagons unloaded and their contents issued. By this time Davis with his brigade was within striking distance of Beverly Ford. But his coöperation could perhaps not be counted upon before the morning of the 15th. A crossing might have been made, however, without assistance from Davis. It should again have been attempted. Stoneman must have known from indications in the sky that a storm was brewing, and before it could break and cause the river to rise, he might have forced the position of Beverly Ford or Rappahannock Bridge, and got his whole command across the river. No delay was caused by, or involved in, Davis' wide turning movement, as it was accomplished by the time the main force was ready to advance, which, under the circumstances, could hardly have been earlier than it was—the morning of the 15th. The cause of Stoneman's tardiness is to be found, not in the elements, nor in any one's failing him under fire or on the march, but in his having handicapped himself with a column of wagons, the contents of which had to be transferred to pack-mules before he could cross the river. He should have packed his mules before leaving Morrisville, and have crossed the river with his whole force on the 15th, ascending it, if necessary, still further for a practicable crossing. He might have dispensed with the supplies that he put on his pack-mules, and carried such supplies as he could in saddle-pockets, trusting to the enemy's country for the remainder.

At the same time that Stoneman was to cross the Rappahannock, Jones and Imboden were to start on their raid to the Baltimore and Ohio Railroad.¹⁰ Imboden, who had moved to Shenandoah Mountain, was to proceed from there on the 15th; W. E. Jones was to take up the march from Lacy Spring about the same time. Thus, as Hooker was coming out of his winter quarters of his own accord, these commanders were starting to "draw him out."

The correspondents of the *Richmond Whig* and *Richmond Examiner* wrote from Fredericksburg:

1.

Report says that the enemy have been massing troops in the vicinity of U. S. Ford for several days past. Yesterday and to-day considerable bodies of cavalry and immense wagon-trains were moving up the river. * * *

2.

* * * It is hoped that Hooker will advance. His coming is anxiously awaited by the Army of Northern Virginia, who now regard

¹⁰ Lee to W. E. Jones, March 25 and April 7.

the destruction of the Army of the Potomac as a military necessity; and believing that the war is near its termination, they desire to give it a brilliant *coup de grâce*. * * *

It was now understood in both armies that Hooker was about to move, but whether he would try to cross the Rappahannock, and if so, where, were still matters of conjecture. In Lee's army it was generally supposed that, if he attempted a crossing, it would be at or near United States Ford. There was not a suspicion of Hooker's purpose of placing the cavalry corps on Lee's line of retreat. As has been shown, the Federal cavalry was believed to be aiming at the Shenandoah Valley.

* * * * *

The rain continued with short intervals, making the river impassable for about two weeks. The Federal cavalry remained near Warrenton Junction, confronted on the south side of the river by W. H. F. Lee's cavalry brigade and Beckham's horse artillery, and on the north side by Fitzhugh Lee's brigade, Mosby's guerillas, the Black Horse Cavalry, and a portion of the 2 N. Ca. Cavalry.

W. E. Jones wrote to Imboden:

There is no sign of the enemy in the Valley. News has reached me from Sperryville just now, but no tidings of the move anticipated [into the Valley]. * * * My opinion is, the attack on the Valley has been abandoned, if ever entertained, by the enemy. * * *

R. E. Lee wrote:

To President Davis, April 16.

The last dispatches from General Stuart, dated yesterday, report the enemy's cavalry north of the Rappahannock, massed opposite Kelley's and Beverly Fords and Rappahannock Bridge. Prisoners report they were rationed for eight days. The cavalry were accompanied by artillery and wagons. General Stuart thinks the movement a feint to cover other operations. He can learn of no force moving toward the Blue Ridge, but thinks from the reports of his scouts that General Hooker intends to transfer his army to White House, on the Pamunkey, or to the south side of James River. My own impression has been that the movement was intended to draw us to the Upper Rappahannock, that Fredericksburg might be seized, and the bridges across the river rebuilt. I do not think General Hooker will venture to uncover Washington City by transferring his army to James River, unless the force in front of Alexandria is greater than I suppose, or unless he believes this army incapable of advancing to the Potomac. My only anxiety arises from the present immobility of the army [of Northern Virginia], owing to the condition of our horses and the scarcity of forage and provisions. I think it all-important that we should assume the aggressive by the 1st of May, when we may expect General Hooker's army to be weakened by the expiration of the term of service of many

of his regiments, and before new recruits can be received. If we could be placed in a condition to make a vigorous advance at that time, I think the Valley [of the Shenandoah] could be swept of Milroy, and the army opposite me be thrown north of the Potomac. * * *

P. S. A dispatch from General Stuart, dated 9 P. M. yesterday, just received, states that the heavy rains and swollen streams have entirely arrested military operations on the Upper Rappahannock.

Hooker wrote to President Lincoln on the 17th :

His [Stoneman's] failure to accomplish speedily the objects of his expedition is a source of deep regret to me, but I can find nothing in his conduct of it requiring my animadversion or censure. We can not control the elements. * * *

While a commander cannot control the elements, he can, within limits, regulate his movements by them. It is rather surprising after reading Hooker's defense of Stoneman in this letter to find his adjutant-general writing to him on the same day :

* * * it was not expected that you would embarrass yourself with wagons in your present expedition. It was supposed that your pack-mules would furnish a sufficient amount of transportation for your purpose.

The general fears that your artillery is so strong that it will detract from the rapidity of your movements. He desires that you will use your discretion in returning to camp such portions of it as will embarrass you.

On the 22d Stoneman received another set of long, rambling instructions in which the following points are to be observed (*Appendix 14*) :

1. He is to be ready to move on short notice.
2. He may subdivide his force, but if he does, he must have the several parts come together at some point in the enemy's country which he is to designate.
3. He is, if necessary, to subsist off the country.

They contain nothing about intercepting the enemy's retreat upon Richmond, which in the instructions issued on the 12th was made the "primary object" of Stoneman's movement. True, those instructions had not been revoked, but those of the 22d, not referring to this object, and dwelling upon certain other objects, might give the impression that the latter had been substituted for the former.¹¹

¹¹ Writing from Warrenton Junction, Stoneman reported his situation as follows. It should be premised that the enemy had evacuated Warrenton, and that Stoneman was drawing his supplies from Alexandria:

"April 22.

"Averell's division and Davis' brigade are on the railroad, half-way between Warrenton and the Junction. Gregg's division and Buford's brigade are at the Junction. All are on the railroad. As we have not, nor, by being there, do we require, wagons to transport our supplies, I shall make arrangements to keep on hand two-days' rations

W. H. F. Lee's brigade (except the 10 and 15 Va.) was at Brandy Station; Fitzhugh Lee's brigade (except one regiment at Stevensburg) and the horse artillery were at Culpeper Court House. W. H. F. Lee sent forward the 13 Va. to meet the advancing infantry. By 9 o'clock P. M. Stuart at Culpeper Court House (Map 8) received a report that Federal troops were making preparations to cross at Kelley's Ford, but their number was concealed by darkness, and he would not leave his position to determine it, for fear of exposing the country in his rear, especially the railroads, to depredations by Federal cavalry. So far as he could observe, the crossing at Kelley's Ford might be but a diversion in favor of such operations. He accordingly ordered the enemy to be enveloped with pickets to observe the direction which he took, and ordered the concentration of his command at Brandy Station by daylight.

The following order was sent to Stoneman:

April 28.

* * * the instructions communicated for your government on the 12th instant are so far modified as to require you to cross the Rappahannock at such points as you may determine between Kelley's and Rappahannock Fords, and including them, and for a portion of your force to move in the direction of the Raccoon Ford and Louisa Court House, while the remainder is engaged in carrying into execution that part of your original instructions which relates to the enemy's force and position on the line of the Orange and Alexandria Railroad and the line itself, the operations of this column to be considered as masking the column which is directed to move by forced marches to strike and destroy the line of the Aquia and Richmond Railroad.

You are further directed to determine on some point for the columns to unite, and it is recommended that it be on the Pamunkey and near that line, as you will there be in position with your full force to cut off the retreat of the enemy by his shortest line. In all other respects your instructions as before referred to will remain the same.

You will direct all your force to cross to-night, or, if that should not be practicable, to be brought to the river, and have it all thrown over before 8 o'clock to-morrow morning. If the fords should be too deep for your pack-animals and artillery, they will be crossed over the bridge at Kelley's Ford. You will please furnish the officers in command of these two columns with a copy of this and of your original instructions.¹²

of long, and six of short forage, and eight of subsistence stores. I patrol the road to Bristoe Station, and have telegraphed the commanding officer of Alexandria of the fact, and requested that the force at Washington be sent out as far as Bristoe, where I will connect with it by patrol from Cedar Run. I am sorry to say that the horses have suffered considerably for want of forage and from exposure to rain and wind. A few days, I hope, will bring them up again. The railroad is in good order up to the Rappahannock railroad bridge and to Warrenton. The construction train is now at the bridge. Three trains have arrived with stores.

"April 23.

"The command is now separated [divided?] by impassable streams, and I am unable to communicate with the different portions of it, owing to the small streams being swimming. The pickets are cut off by high water."

¹² *W. R.*, 39, p. 1065.

Under this order Stoneman's latitude in the selection of a point of crossing was restricted to certain definite limits between Kelley's and Rappahannock Fords; he was required to be across by 8 o'clock in the morning, to divide his command into two columns, and to determine on some point for the columns, after the destruction of the Richmond, Fredericksburg and Potomac Railroad, to unite at and intercept the retreat of Lee's army.¹³

The cavalry corps was accordingly formed in two columns. One consisted of Averell's division, Davis' brigade of Pleasonton's division, and Tidball's battery of horse artillery. This column numbered about 3400 sabers and 6 guns, and was commanded by Averell. The other consisted of Gregg's division, Buford's Reserve Brigade, to which the 6 Pa. had been attached, and a provisional battery of horse artillery under Captain Robertson. It numbered about 4200 sabers and 6 guns, and was commanded directly by Stoneman. The provisional battery was formed by taking a section from Elder's, Clarke's and Vincent's batteries. The remaining sections of these batteries were sent back to Falmouth.

The foregoing order was given to Stoneman at Hooker's headquarters at 5.45 P. M.

From Morrisville to where the cavalry corps lay was 13 miles, from there to where some of the extreme pickets were was 13 more, so that it was quite late at night before the command was all assembled and ready to start.

The head of Stoneman's column started, however, at 5 P. M., and the head of Averell's at 10 P. M.; the former directed upon Kelley's Ford, the latter upon Rappahannock Ford. Averell was to cross on his arrival at the ford, and await orders. At midnight most of the corps was resting at or near Bealeton.

Averell arrived at Rappahannock Bridge about 5 A. M. and found the ford impassable "without imminent hazard of drowning." At 6.25 A. M. he received a copy of Hooker's instructions to Stoneman of April 12 and of those of April 28, modifying these, but no instructions addressed directly to him except a message from Stoneman to the effect that, if the ford was impracticable, he should be guided by his own judgment as to the

¹³ "I concluded to divide the cavalry into two columns, each one outnumbering the entire cavalry force of the enemy between the Rappahannock and James Rivers. They were to cross the Rappahannock the same day with the infantry, the 29th, and one column was to move directly to its destination, while the other was threatening Culpeper and Gordonsville, and as soon as one had passed, the other was to follow and join it. * * * The object was to have no time lost in severing Lee's communications with Richmond" (Hooker, *Rep. of Com.*, IV, 137).

place of crossing.¹⁴ Pursuant to the latter, he marched to Kelley's Ford, where Stoneman's column had arrived at 8 A. M. Stoneman was not authorized to use the bridge except for pack-animals and artillery. But on account of his having but one ford, he assumed the responsibility of crossing half of his troopers by the bridge. On the north side of the Rappahannock at Kelley's Ford was a slough, or swamp, which could not be crossed except by a trestle bridge, constructed for that purpose. Neither the ford nor pontoon bridge, therefore, could be used by the cavalry until the infantry of the V Corps (First and Second Divisions) had cleared the trestle bridge. The cavalry commenced crossing by both the ford and the pontoon bridge about noon.

* * * * *

Using the ford and the pontoon bridge at Kelley's Ford, Stoneman managed "by dint of great exertion" to get all his cavalry over by 3 and his trains by 5 P. M. He camped with his column for the night at Madden. No fire or noise was allowed. The horses remained saddled, the men in each set of fours taking turns in holding the four horses by the bridles while the other three men slept. The night was rendered still more uncomfortable by the cold, drizzly rain.¹⁵

Here [says Stoneman in his report] I assembled the division and brigade commanders, spread our maps, and had a thorough understanding of what we were to do, and where we were each to go. Averell * * * was to push on in the direction of Culpeper Court House, and myself [with the main column] * * * to push on toward Stevensburg. It was expected that Averell would be able to reach Brandy Station that night, driving whatever enemy was there before him, and I was to communicate with him at that point.¹⁶

What orders he issued are not given verbatim in the official records, and appear to have been communicated verbally. Averell reports:

I was directed to proceed in the direction of Brandy Station, reach there, if possible, that night [29th], and communicate with Buford, who would be at Stevensburg. On the day following I was to proceed to Culpeper Court House and Rapidan Station, attacking the cavalry of the enemy and keep him occupied while Buford proceeded with the major-general commanding the corps to execute that portion of the original instructions which referred to operations in rear of the enemy's main body.¹⁷

¹⁴ *W. R.*, 39, p. 1077.

¹⁵ *History of the First Maine Cavalry, 1861-1865*, by E. P. Tobie, p. 134.

¹⁶ *W. R.*, 39, p. 1058.

¹⁷ *W. R.*, 39, p. 1074.

It would seem from the two reports that Averell was ordered to be at Brandy Station on the night of the 29th, "if possible"; and was to govern his movements beyond that point by orders which he was to receive from time to time from Stoneman and to carry out conformably to such general instructions as he might have received; also that he understood that the active operations on Lee's communications were to be executed by the Reserve Brigade under Buford, accompanied and directed by Stoneman. What Gregg was to do, can only be conjectured. It was perhaps to follow the left column as a sort of general reserve. From these circumstances and others to develop later, it appears that the understanding which Stoneman had at this time with his division and brigade commanders as to what they were to do and where they were to go was not in any proper sense a "thorough" one.

Only Buford's brigade went to Stevensburg. From there two squadrons were sent on to Brandy Station to communicate with Averell. Near midnight Stoneman learned from a staff officer of Averell's that Averell had gone into camp not far from Kelley's Ford. He at once sent an officer of his staff with a platoon to recall the two squadrons. These had reached Brandy Station and found there the 13 Va. Cavalry and a battery of artillery, but no sign of Averell. A messenger sent back to Stevensburg with a report to this effect was either killed or captured on the way. After waiting for some time at Brandy Station, the squadrons returned to Stevensburg and thence with the brigade to Madden, arriving there soon after midnight.

Averell had been led to believe by deserters and intercepted dispatches that Stuart with his entire force, reported as four brigades and fifteen pieces of artillery, was at Brandy Station awaiting his approach. He had consequently suspended his advance.

The following dispatch was picked up on the march, delivered to him, and forwarded by him to Stoneman, who, however, was not to receive it to-day:

Important.

HEADQUARTERS CAVALRY DIVISION,
NEAR BRANDY STATION, VA., *April 29, 1863.*

COLONEL CHAMBLISS, Thirteenth Virginia Cavalry.

Colonel: The major-general commanding directs me to say that he wishes you to get a man posted so as to have a view of the road leading

down on the other side of Kelley's Ford, and find out what kind of troops marched down behind the wagons.¹⁸

The enemy have made a demonstration toward Stevensburg, but so far it amounts to nothing. The general is very anxious to know where to look for Stoneman, as we have heard nothing from him.

Most respectfully, your obedient servant,

R. CHANNING PRICE,

*Assistant Adjutant-General.*¹⁹

* * * * *

THE STONEMAN RAID.

On the 29th of April, having followed the army across the Rappahannock, Stoneman camped at Madden, *April* 30. At daylight this morning he prepared to resume the march with as few incumbrances as possible. All the pack-mules and led horses were started toward Germanna Ford to follow in rear of the army. No supplies were retained except three days' subsistence and three days' short forage (ten pounds to the ration), and forty carbine and twenty pistol cartridges per man—all of which were to be carried on the horses of the men and officers. Not a wheel of any description accompanied the expedition, outside of the artillery.²⁰ Stoneman wanted to reach Verdiersville by the interval between Mountain Run and Clark's Mountain, and selected Raccoon Ford as his point of crossing. But satisfied that he would find this point guarded, he ordered Buford to cross at Mitchell's Ford, about six miles below, and open up Raccoon Ford. At 9 A. M. he received Averell's note of the 29th informing him that Stuart was ignorant of his (Stoneman's) whereabouts.²¹

Buford reached Mitchell's Ford about 11 A. M. and found it impracticable. His leading squadron under Lieutenant Mason swam across and marched up the right bank. About 12 M. the remainder of the brigade crossed at Morton's Ford, and detached a squadron to accompany Mason's as advance guard.

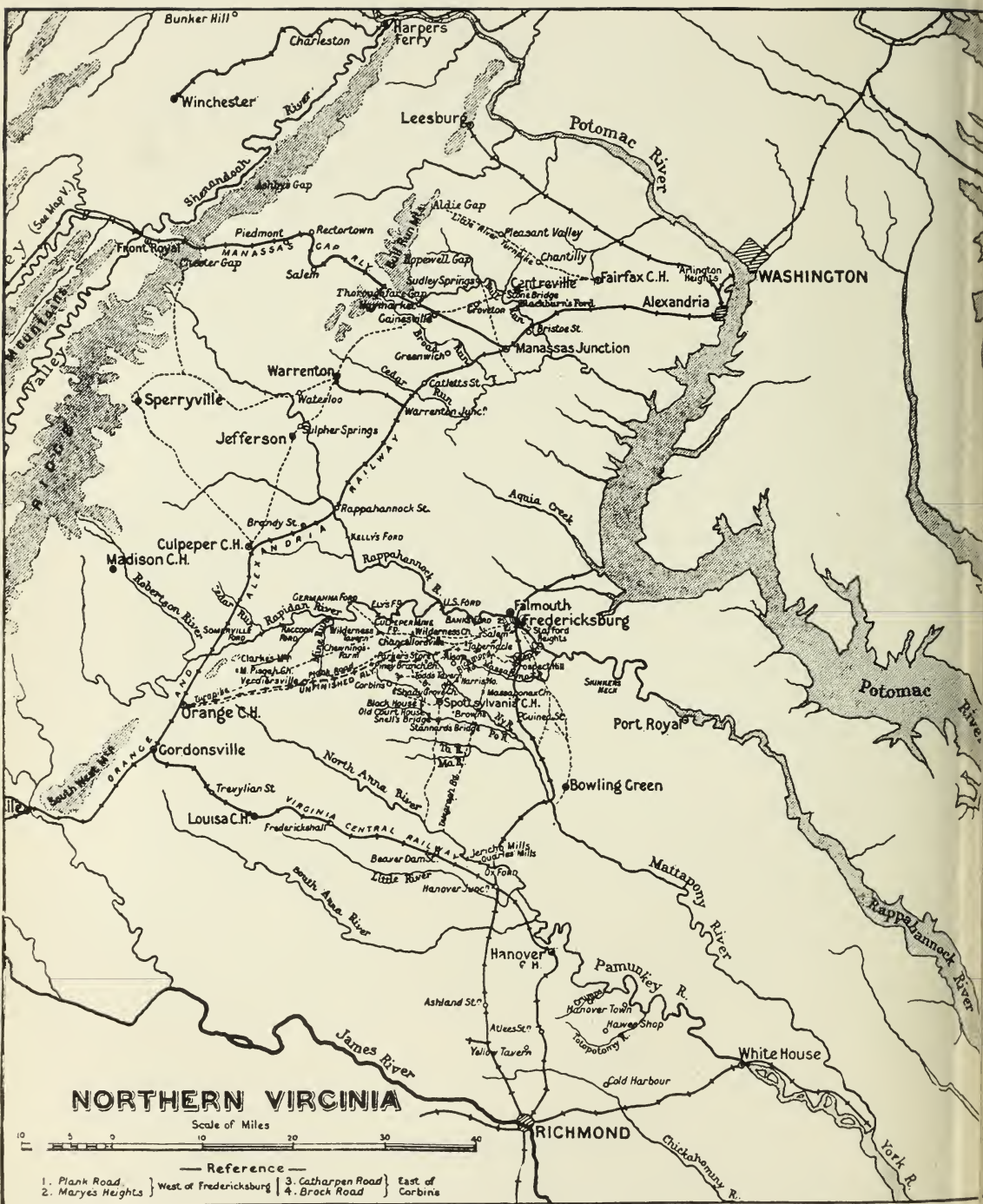
The two squadrons under Mason scoured the country to Somerville Ford. The remainder of the brigade marched to Raccoon Ford, and finding it practicable, was joined by the

¹⁸ Referring, it would seem, to wagons which accompanied the right wing to the vicinity of Kelley's Ford and were probably escorted by troops that were to remain behind.

¹⁹ *W. R.*, 39, p. 1059.

²⁰ For further details of the logistics of "Stoneman's Raid," the reader is referred to the report of Stoneman's chief quartermaster, Lieut.-Col. C. G. Sawtelle, United States Army (*W. R.*, 39, p. 1067, *et seq.*).

²¹ Chapter XV *ante*.



main body under Stoneman. The rear of the column got over about 10 P. M., when the whole command went into bivouack. Stoneman heard that Stuart with Fitzhugh Lee's brigade crossed this morning at Somerville Ford, and that he proceeded toward Fredericksburg.²² He had allowed no fires to be made, as his camp was in plain view of the Confederate signal station on Clark's Mountain, and issued orders for the command to be in the saddle at 2 o'clock in the morning, and in the mean time to stand to horse without unsaddling. A dense fog settled down in the valley; it became very cold. The mud was deep and froze so that it bore a horse. All clothing being wet, the men suffered greatly. Many sank exhausted at their horses' heads, and with reins fastened to wrist, slept for hours despite their discomfort.²³

Early this morning Averell received the following order from Stoneman's adjutant-general:²⁴

* * * we did not get off this morning as soon as was anticipated, but will endeavor to carry out our original instructions in the next twenty-four hours. Keep your communications open with your infantry support. Our pack train with Eleventh Corps.²⁵

By "infantry support" Averell not unnaturally understood the division of the V Corps left at Kelley's Ford. It was intended, it seems, to mean the nearest portion of the right wing at the front (XI and XII Corps). W. H. F. Lee fell back through Culpeper Court House to Rapidan Station, leaving a squadron at Culpeper Court House. Averell's movement to the latter point was made in extended order. For miles to right and left lines of mounted skirmishers steadily advanced in excellent order, driving back the enemy's skirmishers. Immediately in rear marched their support of squadrons in line about one-eighth of a mile apart. Then came the main body of the division, in columns of regiments with squadron front, about three-quarters of a mile apart, each regiment with a squadron as special advance guard. The horse artillery was distributed between the regiments. The whole, as it moved to the sound of cracking carbines over the beautiful open country, formed a grand and imposing spectacle. About noon it contracted its front, and marched

²² Stuart crossed, as previously stated, about midnight (29-30) at Raccoon Ford (R. E. Lee's Report, *W. R.*, 39, p. 797; Stuart's Report, *ib.* p. 1046; *Campaigns of Stuart's Cavalry*, by H. B. McClellan, p. 227).

²³ *Annals of the 6 Pa. Cavalry*, Gracey, pp. 138, 139. *The Battles of Chancellorsville and Gettysburg*, by Capt. A. H. Nelson, p. 23.

²⁴ Averell gives the hour of receipt both as 7 A. M. and as 8.05 A. M. (*W. R.*, 39, pp. 1075 and 1078).

²⁵ *W. R.*, 39, p. 1075.

through Culpeper Court House toward Rapidan Station, meeting with some resistance from Lee's squadron.²⁶

At 4 P. M. he halted for rest on the battle-field of Cedar Mountain (1862), recognizable at this time by a number of open trenches filled with human bones. At 6:30 P. M. being again on the march, he received the following dispatch:

The major-general commanding [General Stoneman] directs me to say that we have been delayed by high water, etc., and that he desires you to push the enemy as vigorously as possible, keeping him fully occupied, and, if possible, drive him in the direction of Rapidan Station. He turns the enemy over to you.²⁷

He understood from these instructions that he was not expected to rejoin the cavalry corps for an indefinite time. The intention was that he should disperse W. H. F. Lee's brigade at once, and march without delay to join the force under Stoneman. Between 7:30 and 8 P. M. he arrived at Rapidan Station and found himself confronted by W. H. F. Lee on the opposite side of the river. All the information that he had been able to capture from a mail captured at Culpeper Court House prisoners and other sources went to show that the enemy believed the Army of the Potomac to be advancing behind him, and that Stonewall Jackson was at Gordonsville with 25,000 men to resist it. This information, strange to say, was "deemed reliable and important," and was sent to General Hooker at 11 P. M.²⁸

May 1—Stoneman intended to take up the march at 2 o'clock this morning. But at that hour the country was covered with the usual morning fog, and as he had no guide, he delayed his start until daylight,²⁹ when he marched to Verdierville. He did not find Stuart there, but struck his trail on the turnpike, and saw therefrom that he had gone toward Fredericksburg. He sent Gregg's division ahead toward Louisa Court House on the Virginia Central Railroad (Map 1, Sheet A). In the course of the day Major Falls of General Gregg's staff, who had been out foraging for a guide, came galloping along the column with an "intelligent contraband" astride his horse behind him. At midnight Gregg's was still on the march, probably in the vicinity of the North Anna. The remainder of Stoneman's command,

²⁶ *History of a Cavalry Company* (A 4 Pa.), by Capt. William Hyndman, p. 89; and *History of the 3d Pa. Cavalry*, by a committee.

²⁷ *W. R.*, 39, p. 1075.

²⁸ *W. R.*, 39, p. 1078.

²⁹ Stoneman's and Buford's Reports (*W. R.*, 39, p. 1060, 1089). According to the report of Captain Harrison, 5 U. S. Cavalry, the march was resumed at 3 A. M. (*W. R.*, 39, p. 1092).

consisting of Buford's brigade and corps headquarters, followed in the same general direction, and camped on the south side of the North Fork of the North Anna. For the first time in three days and nights the horses of this portion of the command were unsaddled and the men allowed to make fires. For Gregg's division there was to be no unsaddling and no sleep, except what the men might succeed in getting in their saddles.

W. H. F. Lee, who had been opposing Averell at Rapidan Station, received an order from R. E. Lee to burn the bridge and fall back on Gordonsville. The Federals had started to burn the bridge, but desisted on seeing that the enemy had anticipated them. Averell withdrew under the impression that the bridge was destroyed.³⁰ In this he was mistaken. The structure, saturated by the recent rains, proved refractory to all the fire that was brought to bear upon it. Though the effort to burn it was not abandoned till retreat made it necessary, the bridge was left standing.³¹

May 2—Gregg's division, detached yesterday from Stoneman's command, arrived within three-fourths of a mile of Louisa Court House at 3 A. M. Its four pieces of artillery were placed in a commanding position and the 2d brigade detailed as support. The 1st brigade was then ordered forward in three columns of attack, the central column to take the town, the other two to strike the railroad one mile to right and left of it. No enemy being found, the pioneer corps went to work destroying the railroad, which it effectually did for a stretch of five miles. The water tank was also destroyed and some commissary stores were seized at the depot. About 10 A. M. Stoneman arrived at Louisa Court House with the remainder of his corps, and pushed out a squadron of the 1st Maine under Captain Tucker toward Gordonsville to ascertain the whereabouts of the enemy. When W. H. F. Lee, about 11 A. M., reached Gordonsville, he heard it rumored that "a large body of the enemy was at Trevilian's Station and Louisa Court-House." He at once detached the 9th Virginia Cavalry in the direction of those places. This detachment had hardly started when its pickets were driven in by the squadron of the 1st Maine. The latter was then in turn forced back by the 9th Virginia. Both sides were subsequently reënforced and the contest resumed, with the net result that each of the opposing commanders gained the information which he

³⁰ *W. R.*, 39, p. 1079.

³¹ *History of the 9 Va. Cav.*, R. Beale, p. 63.

desired. W. H. F. Lee learned that there was "no large body of the enemy" at Trevilian's Station, but that Stoneman, with his whole corps, was at Louisa Court House; and Stoneman learned that W. H. F. Lee was at Gordonsville with infantry, cavalry and artillery. A train, which started from Gordonsville for Charlottesville, had to turn back on account of the presence of a force of Federal cavalry at Cobham Station. At 4 o'clock this afternoon there were three trains at Gordonsville that could not leave by any of the railroads.³²

Stoneman put an operator in the telegraph office at Louisa Court House, who received messages from Richmond giving information of the success of Hooker's operations up to that time. For nearly an hour Confederate messages continued to arrive. When the discovery was made in Richmond that the "Yankees" held the line, a few forcible remarks of disapprobation came over the wires, and communication ceased.³³

Stoneman's present duty, under his orders from Hooker, was to make all haste for Hanover Junction. But no such thought, it seems, entered his mind. He detached Captain Lord with 265 officers and men of the 1st U. S. Cavalry to destroy the track and buildings of the Virginia Central Railroad as far as Frederickshall, a distance of twelve miles, and, if possible, Carr's Bridge over the North Anna, about six miles north of Frederickshall, on the main road from Spottsylvania to Goochland on the James. From Louisa Court House the main column proceeded to Yanceyville, where the South Anna was crossed on a bridge. From this point Captain Merritt was detached with a squadron of the 1st Md., about fifty strong, including pioneers, to destroy the bridges and the fords as far as possible down the South Anna. Stoneman went on to Thompson's Cross Roads, where he arrived at 10 P. M.; his rear guard, consisting of the 1st Maine, came up with him here about midnight. This regiment of Gregg's was again to pass the night without unsaddling and without sleep except what it might get in the saddle. At midnight Lord's and Merritt's detachments were still out. W. H. F. Lee, being joined by Rhett with 1400 men from Richmond, settled down to the defense of Gordonsville. His force now numbered about 2400 men and 6 guns.

May 3—We left Stoneman at Thompson's Cross Roads. There he captured the baggage wagon of a surveying party under

³² *Stahel to Heintzelmann*, W. R., 40, p. 433.

³³ *Annals of the 6 Pa. Cavalry*, by S. L. Gracey, pp. 140, 142.

a Major Blackford, in which he found a set of section maps of this part of Virginia which were to prove very useful to him. The maps that he had brought with him had been prepared by the United States Topographical Engineer Corps, and were based upon surveys made years before the war.

In the course of the forenoon he caught sounds of the artillery firing at Chancellorsville, thirty-five miles off as the crow flies, and was more or less disquieted by it.³⁴ Respecting his intentions, he says in his official report:

At this point the James and South Anna Rivers are less than 12 miles apart, and here I determined to make the most of my 3,500 men in carrying out my previously conceived plan of operations. I called together all my regimental commanders, showed and explained to them the maps, and gave them an idea of what I wished done. I gave them to understand that we had dropped in that region of country like a shell, and that I intended to burst it in every direction, expecting each piece or fragment would do as much harm and create nearly as much terror as would result from sending the whole shell, and thus magnify out small force into overwhelming numbers; and the results of this plan satisfied my most sanguine expectations. I pointed out to them the routes to be taken and the objects to be accomplished on each route.

According to instructions thus issued, parties went out as follows:

1. COLONEL WYNDHAM, with the 1st N. J. and 1st Md., about 400 men, to strike the James River at Columbia (the junction of the James and Rivanna Rivers), destroy, if possible, the canal-aqueduct over the Rivanna, and proceed along the canal in the direction of Richmond, doing all the damage possible. If thought expedient, a detachment was to be sent across the James River to make a dash on the railroad bridge over the Appomattox.

2. COLONEL KILPATRICK, with the 2d New York, about 400 men, to push on to the railroad bridges over the Chickahominy, destroy them and the telegraph, and operate in the direction of Richmond, about four miles from the Chickahominy bridges, doing as much damage as possible.

3. LIEUTENANT-COLONEL DAVIS, with the 12th Illinois Cavalry, about 300 men, to penetrate to the Richmond and Potomac Railroad and, if possible, to the Virginia Central, and destroy communication.

³⁴ My authority for this statement is Lieut. A. S. Austin, Stoneman's commissary officer. J. B., Jr.

4. BRIGADIER-GENERAL GREGG, with the First Maine and 10th New York and two pieces of artillery, to destroy the road bridges, and, if possible, the two railroad bridges on the South Anna.

The bulk of Buford's regular brigade and the 6th Lancers remained in camp as a reserve and provost guard.

The raiding parties were all off by 3 A. M. They were instructed to endeavor to strike the railroad and telegraph at 3 P. M. of this day in order that all striking at the same time, they should find some at least of their objectives unguarded.

The first three commanders, Wyndham, Kilpatrick and Davis, were directed, if they crossed the Virginia Central Railroad, to push on to Williamsburg on the Peninsula as a place of refuge. Gregg was ordered to return to the reserve. It will be observed that none of these parties (six, including Lord and Merritt) was directed upon Hanover Junction "somewhere in the vicinity" of which Hooker expected the main blow to be struck.³⁵ Gregg's column was directed to the railroad crossing of the South Anna, about five miles south of the Junction, and the other three columns upon or toward Richmond. Stoneman was apparently less intent upon checking a retreat of Lee's Army than he was upon entering Richmond, which Hooker did not expect him to do.³⁶

Elzey wrote to Lee:

One regiment has been sent to [railroad] bridge on North Anna, one to Hanover Junction, and a force to [railroad] bridge over South Anna. General Pettigrew's brigade arrived to-day from Petersburg. General Lee from Gordonsville reports enemy moving towards Columbia on James River. They have left the [Va. Central] railroad. General Lee is moving after them. I shall detain Pettigrew's force here to-day.

Captain Lord, sent out by Stoneman yesterday, and Colonel Wyndham, sent out this morning, returned to-day. Lord destroyed Carr's Bridge over the North Anna, and disabled the Virginia Central Railroad for a distance of fifteen miles. Wyndham cut the James River Canal at Columbia, burned five bridges and destroyed a large quantity of supplies. For want of proper implements, he did not succeed in materially injuring the stone aqueduct across the Rivanna. Hearing that W. H. F. Lee was after him with cavalry and artillery, he did not attempt to reach the Appomattox or to proceed as ordered in the di-

³⁵ Williams to Stoneman, April 12.

³⁶ *W. R.*, 39, p. 1065.

rection of Richmond, but took up the march to return to Thompson's Cross Roads. W. H. F. Lee marched all night in pursuit of him.

Kilpatrick, making a forced march from Hungary Station, went into camp at daylight about fifteen miles from his objective, and remained in camp, concealed, all day and about half of the night. At midnight he was again on the march, but not far from his late camp. Davis destroyed one bridge on the South Anna. He struck the Richmond and Potomac Railroad at Ashland, containing an ambulance train from Fredericksburg that contained 250 sick and wounded. He received their version of the fight at Chancellorsville, paroled them, and let them go. He destroyed a railroad trestle bridge, and went on to the Virginia Central Railroad at Hanover Station, arriving about 8 p. m. Here also he destroyed a trestle bridge. Proceeding to Hanover Court House and thence to within seven miles of Richmond he halted and camped for the night.

Merritt, sent out yesterday, left intact the bridge at Yanceyville and one a few miles below it. The latter, it seems, was afterward destroyed by some one else. The second bridge below Yanceyville he destroyed. Overtaken by Gregg, he proceeded with him down the river, destroying a ford at Paine's Mill, then a bridge known as the Factory Bridge, and a few miles further down the Ground Squirrel Bridge. Late in the afternoon Gregg halted his column at Rocky Mills, fifteen miles from Richmond. Here his horses were fed and groomed, and the more fortunate of his men got something to eat. On a report that the railroad bridge across the South Anna was guarded only by a small cavalry picket, a detachment of 200 men, under command of Lieutenant-Colonel Smith of the 1st Maine, was sent about an hour before sunset, with a negro guide, to destroy it. Captain Merritt joined this party with his squadron. An erratic ride through the woods with no roads, seemingly in no particular direction (the guide knowing little about the country), and for the greater part, at a trot, brought the column to the bridge. There it was discovered that the enemy had sent a force of infantry and artillery for its protection. The bridge was not destroyed, but a portion of the railroad track was torn up and some storehouses burned. At midnight the column was on its return march to Rocky Mills. Another night for the 1st Maine without unsaddling. Two-thirds or more of the men allowed themselves to go to sleep and their horses to wander at will.

The column was immensely strung out. The utmost efforts of officers and wakeful men no more than sufficed to keep the men straggling along in single file. Twenty wide-awake determined Confederate soldiers could have captured the whole two hundred.³⁷

The people of Richmond were seized with apprehension. A "Rebel War Clerk" wrote in his diary :

There has been some commotion in the city this afternoon and evening, but no painful alarm—caused by intelligence that the enemy's cavalry had cut the road at Trevillian's Depot, had reached Ashland, and destroyed the depot. Subsequent rumors brought them within eight miles of the city, and we have no force of any consequence here. * * * I think they will disappear down the Pamunkey, and of course will cut the Central and York roads and the wires. Thus communication with Lee is interrupted. The Fredericksburg train of course failed to come in to-day at 6 P. M., and it is rumored there were 700 of our wounded in it.

The Philadelphia correspondent of the *New York Times* wrote :

The latest news from Chancellorsville is that Stoneman has cut the railroad.

That Stoneman had cut Lee from Richmond, at least for a time, must have been known this evening both to Lee and to Hooker.³⁸

There were anxious moments now for Stoneman, waiting for the scattered fragments of his "bursting shell" to do their work and come together again. Apprehending an attack upon his feeble reserve at Thompson's Cross Roads, he sent Lieutenant Mason with a squadron of the 5th U. S. to guard the bridge at Yanceyville and prepare to destroy it, should that become necessary. With a view, in this case, to passing the river by a ford, he detached Captain Drummond with 200 picked men and 4 officers of the 5th U. S. to examine all the fords of the South Anna as far down as Allen Creek. The Captain was directed to proceed, if possible, from the mouth of that stream to Goochland Court House on the James River and clear the place of any hostile force that might be found in it. He found the upper ford practicable and the others impracticable. An hour or two after midnight he went into camp below Allen Creek. Captain Harrison with the remainder of the 5th U. S., numbering 119

³⁷ *History of the First Maine Cavalry*, by E. P. Tobie, p. 139.

³⁸ For Butterfield's erroneous or misleading testimony on this point, see *Rep. of Con.*, IV, 77.

officers and men, was sent to Shannon's Cross Roads with orders to scout the country in the directions of Gordonsville, Fluviana and Columbia.

Uneasy as Stoneman may have been as to his return to the army, his mind was not disturbed, it seems, by a single thought of what he should have been doing. Breaking up his command and sending it off on separate expeditions would have been very well, if his sole duty had been to make raids. But his principal duty was to check the enemy's retreat, and if this failed, to fall upon his flanks and harass or delay him.³⁹ This operation of Stoneman's, which has gone into history as Stoneman's Raid, was ordered, not as an independent operation, but as part of a grand tactical and strategic maneuver. Without Averell, Stoneman's force numbered only about 4000 sabers, but outnumbered the cavalry opposed to it about 2 to 1. The latter advantage was thrown away in order to spread alarm through the enemy's country.

The measures taken for the protection of Lee's communications appear in the following dispatches:

RICHMOND, *May 3, 1863.*

GENERAL R. E. LEE.

GENERAL: One regiment has been sent to bridge on North Anna, one to Hanover Junction, and a force to bridge over South Anna. General Pettigrew's brigade arrived to-day from Petersburg * * *

ARNOLD ELZEY, *Major-General.*

WAR DEPARTMENT, C. S. A.,

RICHMOND, *May 3, 1863, 12 MIDNIGHT.*

GENERAL HAMPTON, Lynchburg, Va.:

I do not think Farmville or Lynchburg threatened. The enemy have, I learn, turned down the river on the north side, either for a daring dash on this city, or, more probably, to escape by the Peninsula to Yorktown or around Port Royal. Move with your forces, as you concentrate, toward Gordonsville.

J. A. SEDDON, *Secretary of War.*

May 4—Apprehending the approach of hostile cavalry, Stoneman moved back to Shannon's Cross Roads, about six miles in his rear. There he had an encounter with the brigade of W. H. F. Lee, set free by the recall of Averell's command. The raiding column under Davis ($\frac{12}{2.3. C}$) started at 8 o'clock this morning from its camp, about seven miles from Richmond, for Williamsburg. At Tunstall Station it was met by a train of

³⁹ Williams to Stoneman, April 12.

cars filled with infantry and a battery of three guns run out from White House. The Confederates took position in a line of intrenchments and repelled the Federal assault. Davis withdrew, and determined to cross the Pamunkey and Mattaponi Rivers and make for Gloucester Point.⁴⁰

Kilpatrick, with his regiment ($\frac{12}{2. 3. C}$) reached Hungary on the Richmond and Potomac Railroad at daylight, and destroyed the depot, telegraph wires and railroad for several miles, charged a battery and drove it to within two or three miles of Richmond. He was now with his single regiment within the line of fortifications of the enemy's capital. A Confederate officer rode up to him with the question: "What regiment?" and was answered "The 2d New York, and you, sir, are my prisoner." This officer proved to be an aide to Gen. John H. Winder. "You're a mighty daring sort of fellows," he remarked, "but you will certainly be captured before sundown."

"That may be," said Kilpatrick, "but we intend to do a deal of mischief first."

Kilpatrick appropriated the specially fine horse which the prisoner was riding, secured the eleven men by whom he was escorted, and made off with his booty and captives. He forded the Chickahominy above Meadow Bridge, burned that bridge by which the Virginia Central Railroad crossed the Chickahominy, and ran a train of cars into the river. Having now crossed the railroad, he was debarred by Stoneman's orders as well as by circumstances from returning to the cavalry corps. Instead, however, of proceeding toward Williamsburg, he decided, as Davis had done, to cross the Pamunkey and Mattaponi Rivers and make for Gloucester Point. Picking up an intelligent negro who knew the roads, he made him act as guide, and in less than two hours reached Hanover town. There he performed the tedious operation of crossing the Pamunkey on a ferryboat that would not carry more than twenty horses with their riders. The last load being safely landed, he destroyed the ferry just in time to check a force of pursuing cavalry, burned a train of 30 wagons loaded with bacon, took 13 prisoners, and camped for the night about 5 miles beyond the Pamunkey. The two railroads connecting Hanover Junction with Richmond were now both cut, each in two places.

Captain Harrison, with his 119 officers and men of the 5th U. S., arrived at Shannon's Cross Roads about half-past 2

⁴⁰ *W. R.*, 39, p. 1087.

o'clock A. M. and established pickets. He had hardly done so when he was attacked by a regiment of Virginia cavalry, about 800 strong, under W. H. F. Lee, and driven back upon Lieutenant Mason at Yanceyville, where he made arrangements to hold the bridge. Word was sent to Stoneman of the proximity of the enemy, and Buford's command and the lancers (6th Pa.) came up at a trot accompanied by Stoneman, but not in time to strike the enemy. Captain Harrison, in this affair, lost 2 officers and 30 men captured, and 4 men wounded, one having seven saber cuts. W. H. F. Lee returned to Gordonsville. Captain Drummond with his 200 men, also of the 5th U. S., took up the march about daylight for Goochland Court House. Halting in the vicinity of that place, he had it examined, and found it unoccupied and almost deserted. He then returned to Thompson's Cross Roads, but not to his regiment, which was now with the reserve at Yanceyville.⁴¹

About 2 A. M. Lieutenant-Colonel Smith with his 200 men returning from his attempt to destroy a bridge, arrived at Rockville and found that the remainder of Gregg's command had gone. Without stopping to rest, he pushed on in search of it. Men who had thus far kept awake gave up in despair. Arguments, orders, curses, and even blows, could not keep them awake. About 3.30 A. M. the detachment found the command about three miles from Rockville, standing "to horse," and expecting every moment to receive orders to move. Oblivious to this circumstances, the exhausted troopers threw themselves upon the ground to rest, and got about an hour's sleep.⁴² A half a dozen of them did not get this much, for as soon as they arrived they were sent off by General Gregg to carry dispatches to General Stoneman at Thompson's Cross Roads. They reached Stoneman and delivered the dispatches to him just as he was starting out from the Cross Roads for Yanceyville. W. H. F. Lee wrote to Elzey, magnifying Stoneman's eleven regiments of cavalry to twenty-eight.⁴³

This was the sixth day since the cavalry corps crossed the Rappahannock, the last according to Stoneman's understanding that he had to wait to hear from Hooker. He had not received any communication from him, and since the 2d had heard nothing as to the situation of the army, except vague rumors of its

⁴¹ This detachment did not rejoin the regiment until noon of the 6th.

⁴² *History of the First Maine Cavalry*, by E. P. Tobie, p. 140.

⁴³ *W. R.*, 39, p. 1097.

defeat and capture; the rations for man and beast, which he had carried with him, were exhausted, and foraging was becoming more and more difficult. So in a council of war which he called this evening, it was decided that the portion of his corps that he now had with him should return to the army by the route that it had come by.

May 5—To deceive the enemy, a detachment of 646 men of the regular brigade on picked horses was sent under Buford to threaten any force that might be in the vicinity of Gordonsville and induce W. H. F. Lee and Hampton to believe that Stoneman was to march to that way.⁴⁴ The outlying detachments were left to find their way to the main body as best they could. Buford was to rejoin it at Orange Springs on the following day. The main body started this evening in a thunder shower with the 1st Maine regiment as advance guard. It had as guide a negro who, to gain his freedom, engaged to pilot the column by a route out of reach and observation of the enemy, who occupied the main roads.⁴⁵

The shower settled into a steady rain; the night was very cold. The men, who during the day had been inclined to complain of the heat, now shivered in their saddles. After crossing the South Anna at Yanceyville the bridge at that point was destroyed. Proceeding northward the column crossed the railroad at Tolersville and the North Anna near the Victoria Iron Works. It was so dark that a trooper could hardly see his file leader unless he rode a white horse; the way lay through swamps, thickets, woods, cow-paths, by-paths, every sort of communication except a highway. The dismal ride was made more dismal by an occasional shot from a guerilla, and the doleful note of a whippoorwill that followed the column all night.⁴⁶

Captain Drummond, with his 200 men of the 5th Cavalry and another outlying detachment of about 100 men of the 2d Cavalry, under Captain Rodenbough, started separately from Thompson's

⁴⁴ (*W. R.*, 37, p. 1062)—"After thinking the matter over, I determined to send General Buford with 650 picked horses of his brigade to threaten any force in the vicinity of Gordonsville, and induce Lee and Hampton that we were going to get out by that way; and another force, under Captain Rodenbough, was sent in the direction of Bowling Green with the view of threatening the enemy's communications in that direction and under cover of night, with the main body, to take the middle road leading through Tolersville and crossing the North Anna near the Victoria Iron Works, from thence to Orange Springs, where all were to rendezvous the next day." (*Extract from Report of General Stoneman.*)

⁴⁵ MSS. narrative by Brig.-Gen. E. V. Sumner, United States Army, retired, lieutenant and aide-de-camp on General Stoneman's staff.

⁴⁶ *History of the First Maine Cavalry*, by E. P. Tobie, p. 141.

Cross Roads to find and rejoin the main body. Rodenbough took up the march at 8 p. m., crossed the South Anna by the bridge at the Cross Roads, and then set fire to it. Where Drummond crossed the river is not known.⁴⁷

Davis ($\frac{12}{2, 3, C}$) crossed the Pamunkey at Putney's Ferry and the Mattapony at Walkerton without meeting with serious opposition. Between the two ferries a portion of his command under Major Bronson became separated from the rest.

Kilpatrick ($\frac{2}{1, 3, C}$) was on the march at 1 a. m. At Aylett's on the Mattapony he captured 2 officers and 33 men, burned 45 wagons and a depot containing more than 60,000 barrels of corn and wheat, and quantities of clothing and commissary stores. Crossing the Mattapony, he destroyed the ferry just in time again to check the enemy's cavalry. Late in the evening he destroyed a third wagon-train and a depot a few miles above and west of Tappahannock on the Rappahannock; and through the night continued his march southward, aiming at King and Queen Court House, pursued by cavalry which he supposed to be a portion of Stuart's.

At Aylett's Lieutenant Estes of the 1st Maine, serving on Kilpatrick's staff, was detached with ten men to dash across country northward and communicate, if possible, with Hooker. He struck the Rappahannock at Tappahannock and found the river too much swollen to cross, but surprised, captured and paroled a lieutenant and fifteen men. The county militia, about 400 strong, assembled under a General Mule and marched upon him. Summoned to surrender, he refused, mounted, and spurred rapidly with his escort down the river. *En route* he caught a Confederate major, 2 captains and 3 privates going to join their regiments, and paroled them. General Mule, with about 300 of his men, followed closely, and soon had the little party in a *cul de sac* between the swollen river and the Dragon Swamp. They again refused to surrender, abandoned their horses, destroyed their arms, and took to the swamp. Here the militia gave up the pursuit, but the planters turned out and went after them with bloodhounds. At midnight they were probably in full cry on a hot trail.

The perplexity of President Davis and others at having to reconcile Lee's report of a "great victory" with rumors created

⁴⁷ The author has been unable to learn the route followed by this column.

by Stoneman's cavalry, occasioned to-day the following communications:

Seddon to Lee.

* * * The enemy's cavalry in detachments, varying in numbers from 500 to 2000, reported by Gen. W. H. F. Lee, to be twenty-seven regiments [say 8100 men], have been making raids from Louisa Court-House to Columbia; in Goochland [County], to Ashland, Hungary Station, Hanover Court-House; [and] the line of the [Virginia] Central Railroad to the Chickahominy. They have been hovering around the city with two or three regiments apparently menacing attack, probably covering escape of all down the Peninsula. We have a force to protect the bridges over the Annas and to defend the city, but want cavalry to punish the marauders. Hood's division is expected here this evening. The railroad communication shall be opened at the earliest practicable moment.

To W. H. F. Lee, Gordonsville.

The general detachments of the Yankee cavalry that have been prowling in Goochland and around this city, with the exception of about 500 who escaped down the Peninsula, are from concurring reports believed to have returned toward Louisa Court-House or somewhere thereabouts, perhaps toward the Rapidan.

Longstreet to Elzey.

* * * I shall remain here [at Petersburg] for the present, to try and prevent this place falling into the hands of the enemy. Some of my troops marched 34 miles the night before last, and all marched all night and nearly all day and night last night, so they must be somewhat scattered. I will hurry them up as much as possible. Hood is not yet at Ivor.⁴⁸

Send out citizens in all directions to try and have all roads blocked by which the enemy may effect his retreat. Felling trees thickly, particularly in the streams, may prevent the escape of the enemy.

To Seddon.

I leave at 7 o'clock this evening for Richmond.⁴⁹

W. H. F. Lee at Gordonsville heard by telegram from Richmond "that the enemy was everywhere."⁵⁰

May 6—Stoneman halted for breakfast and rest from 4 to 7 A. M., then resumed the march with great caution. He received no intelligence from the Army of the Potomac. Every few miles he ordered a halt, and had the country in front and on the flanks thoroughly patrolled. He reached Orange Springs between 9 and 10 A. M. and there found Buford awaiting him.

⁴⁸ Pickett was in rear of Hood.

⁴⁹ *W. R.*, 26, p. 1045.

⁵⁰ *W. R.*, 39, p. 1098.

Buford came near being cut off. When the head of his column reached the North Anna, which was about daylight, the water was rising rapidly, and before the rear had crossed the river it was swimming. The rear guard found it impassable, and crossed on rafts. Rodenbough and Drummond were given up as lost, but rejoined the command safely, the former about 10 A. M., the latter about 12 M.

Stoneman now first heard through negroes that the army, having been repulsed, had withdrawn to the north bank of the Rappahannock, but he did not know how much of such reports to believe. Starting at noon, he made another all-night march. It rained harder, the darkness was blacker and the roads muddier than the night before. There was the same mournful refrain of a whippoorwill and an occasional shot as if from the same guerilla. At the halts the men and horses were generally sound asleep. Intense quiet would prevail until some luckless fellow would lose his balance and fall to the ground, when the rattling of his saber and accoutrements would make those about him and subject him to a shower of unfeeling epithets, or some innocent snorer would evoke an outcry of "Put a nosebag on him," "Buck and gag him," etc. The advance got out of the woods and swamps at Verdiersville on the Orange Plank Road and shivered there an hour or two waiting for the rear of the column to catch up. When the march was resumed, it was comparatively easy, pleasant and rapid. The men had no longer to give constant attention to their horses. Many of them took advantage of their freedom from care to go to sleep. A number were led off the road by Confederate scouts and taken prisoners. An attempt was made thus to mislead and capture the train, but was frustrated by the quartermaster in charge of it. The column passed within sight of the enemy's camp-fires and within sound of his drums, but was not attacked.⁵¹

Kilpatrick at sundown came upon a body of cavalry in the vicinity of King and Queen Court House, and advanced to attack it, when he discovered that it was the stray portion of the 12th Illinois under Bronson. The two commands probably bivouacked there together.⁵²

Lieutenant Estes and his ten men in the Dragon Swamp were run down and captured. Refusing to be paroled, they were put under guard and marched off for Richmond.

⁵¹ *History of the First Maine Cavalry*, by E. P. Tobie, p. 142.

⁵² *W. R.*, 39, p. 1084.

The first report received in the Federal lines from any part of Stoneman's force was the following dispatch:

YORKTOWN, May 6.

MAJOR-GENERAL DIX: Colonel Davis, of the Twelfth Illinois Cavalry, with the advance of his regiment, has arrived at Gloucester Point, having accomplished fully the orders of General Stoneman. I have sent a cavalry scout up the Richmond road to get information of any of our cavalry which may be coming down. General Stoneman seems not to have been aware that the enemy have all along had troops on this Peninsula. * * *

E. D. KEYES,
Major-General.⁵³

The perplexity of the enemy occasioned the following communications:

Lee to Seddon.

* * * Unless some of the cavalry in North Carolina and the south is sent here, it will be impossible to arrest these raids, and they will roam through this entire section of country with little or no molestation.

Longstreet to Seddon.

* * * General Hampton ordered to unite his force with that of Captain Minor and with the main force to hover on the enemy's [Stoneman's] rear with the small, select parties, to block all roads that the enemy can take in retiring, and use every means of detaining the enemy until we may be able to set out a force that may destroy the enemy's column. General W. H. F. Lee and General Pettigrew are ordered to keep out their scouts, and endeavor to intercept the passage back of the enemy's cavalry, and to have all of his roads blocked by felling trees in his way.

Seddon to Lee.

* * * General Longstreet reached here last night. His forces in part were then in Petersburg, resting from long march. A train with escort and provisions was sent [to you] yesterday. All possible effort shall be made to keep open the railroad and supply you.

It would appear from the last two sentences that railroad communication between Fredericksburg and Richmond was re-established yesterday, the 5th, having been interrupted during part of the 3d and 4th and part of the 5th, say, two days. That this line was open at any rate on the 6th is shown by the following message telegraphed to-day by Colonel Bradley T. Johnson at Hanover Junction to General Elzey at Richmond:

Train has taken my forage to Fredericksburg. Please send me forage for 70 horses on next train.

⁵³ W. R., 26, p. 701.

May 7—As Stoneman's cavalry left the Orange Plank Road, heading for Raccoon Ford, the 2d U. S. Cavalry was detached to Germanna Ford to guard that crossing against any enemy that might threaten the column. There the first reliable information was obtained to the effect that the Army of the Potomac had recrossed the Rappahannock. Stoneman's advance crossed the Rapidan at Raccoon Ford about 2 A. M. and the rear about daylight.

Lieutenant E. V. Sumner, Aide-de Camp of General Stoneman, with ten of the best men and horses of the regular brigade, was detached to find the commanding general of the Army of the Potomac and deliver to him a written report from General Stoneman. Skirting the left bank of the Rapidan and keeping off the road as much as possible, he reached Germanna Ford without seeing anyone. He entered the Ford with his party intending to cross, and hoping to find the Army of the Potomac on the right side and victorious, when sitting on his horse in the stream and scanning the landscape about him with the hawk-like glance that a soldier acquires in reconnoitering, he caught sight of a small white object that looked like a handkerchief waving at him from a window in a house that he had passed. Taking a couple of men and riding back, he found where he had been looking a lady who, though a Virginian, was in sympathy with the North. She warned him not to go any further in the direction that he had taken, stating that the Confederates had an outpost just beyond the ford. He promptly withdrew from the ford, and on a little reflection, decided to heed this warning and take a longer but surer route. He accordingly took up the march with his escort in the direction of Kelley's Ford. Coming suddenly upon an outpost of the enemy, he rushed past it, firing into it. In a few moments a mounted party was in hot pursuit, and it was a race between him and the enemy for the ford, perhaps nine miles off. He succeeded, by turning on the foremost of his pursuers, in dismounting several of them, and just before dark reached his goal with all his men. But on this day it was not a ford. The Rappahannock was swimming, full to the banks, and about 200 yards wide. Giving his men the choice between following him and being captured, he plunged into the stream and started across alone. His men, with the exception of two or three who hid in the bushes and afterward joined Stoneman, were soon in the enemy's hands. His pursuers, on reaching the water's edge, commenced firing at him.

Being deep in the water by the side of his swimming horse, he made a difficult target, and the Confederate fire was distracted by that of a strong Federal picket on the opposite side of the river. Neither horse nor rider was hit. Wet and chilled as he was, and urged to rest and recuperate, he started at once on the last stretch of his journey, a distance of about nine miles. Reaching the headquarters camp, he guided his horse into the maze of tents and headed him toward that of the commanding general. The animal kept the direction, and did not stop until his nose rubbed against the front pole of the general's fly. The rider was unconscious. It was 11 o'clock at night. The apparition of his equestrian statue caused sufficient excitement to bring out the adjutant-general who, inspecting him, exclaimed: "Why, this is Lieutenant Sumner of Stoneman's staff." There was no reply. He was gently lifted from his horse, carried into an adjoining tent, stripped and rubbed, under the direction of a surgeon, rolled in warm blankets and left to rest, which he did by sleeping until noon of the following day. In the meantime papers found in his boot were delivered to General Hooker.

Stoneman's main column on the north side of the Rapidan took a good rest. The horses were unsaddled and fed what little forage there was. The men were permitted to build fires and cook what meager rations they had. About 10 A. M. the march was resumed, and the whole command went on to Kelley's Ford, where it arrived about 9 P. M. The night being too dark to attempt a passage, the troops rested until morning near the ford. Here it was learned that the army was back in its old camps about Falmouth.

About as Stoneman started out from Raccoon Ford, Kilpatrick with his regiment, after a fifty-mile march, arrived at Gloucester Point. Since leaving Stoneman, he and Davis had marched about 200 miles in less than five days.

The following dispatch went to Washington:

YORKTOWN, VA., May 7, 1863.

HON. E. M. STANTON, Secretary of War:

Colonel Kilpatrick, with the Harris Light Cavalry and Twelfth Illinois Cavalry, have just arrived at Gloucester Point, having accomplished the object of their mission fully and most gallantly * * *

RUFUS KING,

*Brigadier-General.*⁵⁴

This morning General Dix and General Keyes moved up the Pamunkey River with about 5000 infantry, 2 batteries of artil-

⁵⁴ *W. R.*, 26, p. 706.

lery and a battalion of 100 cavalry to West Point and established a post there. The cavalry under Major Hall was pushed on at once to White House, where it destroyed the railroad bridge across the Pamunkey. On its way back it met the Confederate column escorting Lieutenant Estes and his men to prison. A short sharp action, and the escort and prisoners changed places. Lieutenant Estes and his men escorted their late escort to Gloucester Point.

Lee sent off the following communications :

To Seddon.

* * * It is probably Stoneman, on his way to Rappahannock. General Stuart with Fitz Lee's brigade, will endeavor to strike them.

To President Davis.

I hardly think it necessary to state to your Excellency that unless we can increase the cavalry attached to this army we shall constantly be subject to aggressive expeditions of the enemy similar to those experienced in the last ten days. * * * If I could get two divisions of cavalry, I should feel as if we ought to resist the three of the enemy * * *

As soon as it was light enough to see Stoneman's cavalry proceeded to cross the Rappahannock at Kelley's Ford. The only craft available was a flat-bottomed boat or scow. This was used to transport the ammunition chests of the artillery. The pieces and caissons were drawn over the bottom of the river, the horses swimming. One piece after another was pulled out by its eight horses as they gained their footing on the north bank—its muzzle running like a water main. The troopers and cannoneers swam their horses sitting in the saddle. The emaciated animals could hardly stem the swift current. There was but one exit for them on the north side wide enough for two to land and ascend the bank together. Every one felt that the enemy was not far off and might come up yelling and shooting at any moment. This feeling grew stronger as the remnant still to cross grew less. Stoneman remained, nevertheless, on the south bank until almost the entire command had left it, when he took to the boat and went over among the last. The only losses were one man and five or six horses. The crossing was completed about dark, when the march was continued to Bealeton Station.

Lieutenant Austin, Stoneman's Commissary, who crossed the Rappahannock with the head of the column, rode on to Falmouth, and arrived at army headquarters in time to breakfast

with Hooker and Butterfield. The informal report which he rendered of Stoneman's operation was received rather coldly. Hooker was apparently not pleased. Butterfield intimated that Stoneman had not done what he set out to do. He remarked: "From your account, I don't see but that you are ready to start out on another expedition right away." Austin, somewhat nettled, retorted: "Perhaps, sir, your long experience with infantry has unfitted you to form a fair estimate of the work of cavalry," or words to that effect.

Longstreet wrote to Seddon:

All our reports represent the enemy's main cavalry force returning to the Rappahannock by the same or nearly the same route as that they came [by]. I fear that no effort has been made by our forces or citizens to obstruct his routes.

The cavalry corps remained over the 9th at Bealeton, receiving supplies from Alexandria. On the 10th, leaving a squadron to picket the railroad from Rappahannock Station to Cedar Run, it marched to Deep Run; and on the 11th, leaving the Reserve Brigade, Buford's regulars, to guard the Rappahannock from the railroad Falmouth, returned to its old camp with Army of the Potomac.⁵⁵

The projected movement of Stuart with Fitzhugh Lee's brigade against Stoneman was not made. It seems that the Confederates had no suspicion of the faithful and efficient guidance that was furnished the Federal cavalry by negroes of the country, and no exact information as to its movements. Stoneman's passage of the river was not known to them for several days after it was effected. As late as the 11th Lee wrote to Stuart: "Hood is at Fredericks Hall * * * I hope between you two you may scatter Stoneman."

Kilpatrick remained at Gloucester Point, resting and recuperating, until the 30th of May. He then marched with his own regiment and the 8th Illinois through Gloucester Court House and the Dragon's Swamp to Saluda and thence to Urbana on the Rappahannock, taking some prisoners and destroying a considerable amount of property. He crossed at Urbana with his command on transports sent to meet him and proceeded to Falmouth, where he reported to Hooker on the 3d of June.

⁵⁵ *W. R.*, 39, p. 1063.

COMMENTS ON STONEMAN'S RAID.

Stoneman must be held responsible for Averell's not rejoining him from the vicinity of Rapidan Station. His order of April 30th admits of the interpretation by which Averell accounts for his continued separation from him; and Averell could not refuse or fail to obey an order from Stoneman, though it contravened a prior order of Hooker's. He was bound to obey the last order that he received; and he carried out Stoneman's orders as he understood them. But it must be said that a general of cavalry, taking Stoneman's orders in connection with Hooker's of April 12th should not have misunderstood them as Averell did. Averell contented himself between April 29th and May 2d with advancing from Kelley's Ford to Rapidan Station, a distance of twenty-eight miles, without inflicting any appreciable injury upon his opponent, whom he outnumbered more than three to one.

Neither Stoneman nor Averell seems to have caught the spirit of the orders he received. Hooker is but just when he remarks before the Committee on the Conduct of the War: "It is charitable to suppose that General Stoneman and Averell did not read their orders, and determined to carry on operations in conformity with their own views and inclinations."

Instead of being scattered to raid, Stoneman's troopers should have been used in a body to beat the road to Fredericksburg for the retreating Confederate army. Possibly Stoneman's tactics are attributable to his physical condition. Throughout this campaign he was a sufferer from hemorrhoids, the cavalryman's complaint. He could not sit in a saddle without pain, and so was physically unfit to be on active service. It is not improbably that this circumstance determined his adoption of a plan that would exempt him for a day or two from riding.

The damage done by the Federal cavalry to the railroads was easily repaired. Stores were destroyed in considerable quantity, but their loss did not seriously effect the Confederate commissariat. The question may be asked: What would have been the strategic effect, had Lee's army been defeated, of the damage done by Stoneman to the Confederate communications? It would have depended largely upon the character of the pursuit. If this had been prompt and vigorous, and Stoneman had got his scattered regiments to operate against the front and flanks of the retreating army—neither of which supposition seems, in

the light of events, altogether plausible—it would have been a serious embarrassment, but not necessarily a fatal check, to the enemy. Stoneman claims in his report that “all the road bridges across the South Anna and several across the North Anna were completely destroyed, placing a ditch fordable only in a very few places between the enemy and Richmond.” Admitting that this was the case, it is not improbable that these “very few places” would have been found and utilized, and that Lee would have got away from Hooker as he got away from McClellan after Antietam, and was to get away from Meade after Gettysburg.

Stoneman's cavalry had indeed a share in deterring the enemy from following the defeated Army of the Potomac across the Rappahannock, but it might better have prevented that army from being defeated. It gained from its operations hardihood, instruction and morale, but these acquisitions, together with the damage which it inflicted upon the enemy, directly and indirectly, materially and morally, were hardly an offset to the loss which it sustained in horseflesh. About 1000 of Stoneman's horses were abandoned. Most of these were replaced by brood mares and work horses, not suitable for cavalry, and mules. A number of men, who could not be remounted, were left behind to fall into the enemy's hands. On the 13th of May Stoneman reported the portion of the force brought back with him that was then fit for duty in the field as about 2000, less than 50 per cent. of the total. On the 27th of May Pleasanton, who had succeeded Stoneman in command of the cavalry corps, reported the number of serviceable cavalry horses present as 4677.



Lt. Sumner. Lt. Cross. Capt. Alexander. Gen. Stoneman.

METHOD AND HOURLY PROGRAM FOR THE INSTRUCTION OF THE JAPANESE RECRUIT.*

TRANSLATED BY SECOND LIEUT. OLIVER A. DICKINSON, FIFTH INFANTRY.



RATHER than give any illustration of the method which is followed in Japan in the instruction of the recruit, we believe it better to present to our comrades the skeleton outline of their method and their hourly program. It is very interesting and we consider it apropos at this time.

TRANSLATOR'S NOTE.

In general, the system of first instruction for the recruit is similar to that in our own service. The salient point of difference is in the time given to, and the kind of, physical exercises, purely non-military, which are undoubtedly better than the routine which obtains in our service. Exercises which develop co-ordination of mind and muscles, suppleness and strength are better preparatory courses for the hard work and endurance necessary in war than aimless routine, however thorough. Any scheme which calls all the men into competitive contests of skill and strength is better than one which develops only a few who, of necessity, need such development least, being already the most perfect in those requirements.

The time given to instruction in bayonet fencing is time well spent, provided their system of self-defense is a sane one and not merely a gymnastic drill, as is the case in our service.

The natural tendency to superficial cleanliness is an enviable trait, but as this is a temperamental virtue there is nothing in their system, in this particular, which is better than our own.

HOURLY PROGRAM AND OUTLINE OF DAILY DUTIES.†

At	6:00 A.M.	Reveille.
From	6:00 to 7:00 A.M.	Arrangement and police of barracks.
"	7:00 to 8:00 A.M.	Breakfast and rest.
"	8:00 to 9:00 A.M.	Lecture.
"	9:30 to 11:30 A.M.	Gymnastics and drill.
"	11:30 to 12:00 M.	Rest.
"	12:00 to 1:00 P.M.	Lunch and rest.
"	1:00 to 3:00 P.M.	Gymnastics and drill.
"	3:00 to 5:30 P.M.	Bath and rest.
"	7:00 to 8:00 P.M.	Lecture.

*From the "Reaista Tecnica de Infanteria y Caballeria" (Segunda Epoca. Tomo XVII, Numero V).

†This date is taken from the Austrian Review, *Strefleurens Militarische Zeitschrift*.

At 8:30 P.M.....Retreat.
 From 8:30 to 9:00 P.M.....Recreation.
 At 9:00 P.M.....Taps.

Wednesdays and Saturdays, from 3:30 to 4:30 (P.M.), there are games of sport.

On Sunday, only, the soldiers are allowed to leave the barracks from 8:00 A.M. to 5:30 P.M.

As is seen, this outline of duties or hourly program takes into account very particularly the temperament of the Japanese. Daily bathing from 3.00 to 5.30, a bath which, as our readers know, is taken in water at a high temperature. Also an important place is conceded to the gymnastic work and the sports to which all Japanese are very much attached. Moreover, and to the contrary of that which obtains in other countries, the Japanese soldier does not begin drill upon rising from bed, but first he takes an hour in cleaning up (policing); afterward he takes his breakfast and goes to a theoretical lesson for one hour. Thus it is that not until two hours after rising does he begin the physical exercises.

PROGRAM OF INSTRUCTION OF RECRUITS FROM THE FIRST OF DECEMBER TO THE FIRST OF MARCH.

First and Second Weeks.—Drill, two hours in the morning and two in the afternoon.

First Week.—

Position of the soldier without arms.

Honors rendered in the street on the march.

Theoretical instruction (one hour in the morning and one in the afternoon); the "Five Commandments" of the Emperor. For the soldier: "Military Penal Code," names of the superior officers up to and including the colonel (chief of the Regiment). Gymnastics: Ten or twelve minutes before each drill period. Wednesdays and Saturdays: one hour of games of sport; exercises of agility.

Second Week.—

Double time.

Honors: Indoors and when the soldier is carrying anything in his hand. Facings: To the right (and left), half right (and half left), and the about.

Third Week.—

Practical instruction:

Without arms. Position of the soldier with arms.

Theoretical instruction:

How to take the rifle apart. Gymnastics; work without apparatus; cleaning the rifle; arrangement of barracks (administration).

Fourth Week.—

Practical instruction:

Drill under arms: marching, honors, facings, manual of arms, fix and unfix bayonets.

Theoretical instruction:

Learning to know the uniforms (of the different arms and grades); names of the superior officers (brigade and division commanders); importance of guard duty; gymnastics; continuation of the progress already made.

Fifth Week.—

Practical instruction:

Position of the body; to load and unload the piece.

Theoretical instruction:

History of the regiment; importance of the rifle; gymnastics; continuation of what has already been learned.

On account of New Year's, there are five holidays, consequently the recruits learn little during this week.

Sixth Week.—Beginning of exercises in the field (two days a week).

First day: Nomenclature of the accidents of the terrain.

Second day: Drill in extended order, executed by old soldiers; explanation by officers of, the combat, and of what the conduct of the skirmisher ought to be; elementary drill in the school of the skirmisher; utilization of the terrain.

Drill:

The charge (double time and fixing bayonet while running); instruction in line of skirmishers.

Theoretical instruction:

Moral importance of the line of skirmishers and the manner in which each individual ought to conduct himself; interior police guard duty; gymnastics; continuation of the instruction given; bayonet fencing (two hours a week); fundamental exercises.

Seventh Week.—

Practical instruction:

Drill by squads in close order; deployment as skirmishers; written exercises for scouts and combat patrols.

Field exercises:

First day: Conduct which the isolated skirmisher should follow; manner of utilizing the terrain.

Second day: Conduct of isolated skirmishers in the presence of an enemy represented by old soldiers; march of the patrol; method of removing natural obstacles.

Theoretical instruction:

Method of procedure for patrols; firing regulations; estimation of distances; theory of the trajectory, line of sight; conditions necessary for good sighting; gymnastics; bayonet fencing; continuation of the instruction already given.

Eighth Week.—

Practical instruction:

Repetition and perfecting of that which has already been learned.

Firing (two days a week):

First day: Firing with drill (dummy) cartridges, and explanations made by instructors.

Second day: Firing with ball cartridges to accustom the soldier and explanations.

Field exercises:

First and second days: Discourse on patrols and lines of skirmishers acting against an imaginary enemy—the former work independently and the latter under command of non-commissioned officers; gymnastics and bayonet fencing; continuation of the progress made.

Ninth Week.—Drill by sections in close order.

Field exercises:

First day: Deployment of the section as skirmishers.

Second day: March of the section against an imaginary enemy (ending the attack with the charge at full speed).

Firing:

Beginning of elementary firing.

Theoretical instruction:

Explanations concerning elementary firing; importance of the attack; utilization of the terrain by the section; gymnastics and bayonet fencing; continuation of the progress made.

Tenth Week.—Drill by sections in close order.

Field exercises:

First day: Attack of the section against an imaginary enemy; combat patrols; night drill to accustom the sight and hearing.

Second day: Repetition; preparatory drill for individual firing in war. (Veteran soldiers act as assistants to the instructors.)

Night drill:

Duty of patrols.

Firing:

Elementary firing.

Theoretical instruction:

Conduct which ought to be followed in hand-to-hand fighting; conduct of the skirmisher in the section; review of the theory of firing; gymnastics; continuation of the progress made; bayonet fencing; fencing bouts.

Eleventh Week.—Drill; conduct of the company reserve.

Field exercises:

First day: Discourse on the point in the vanguard; night drill; practical work of patrols.

Second day: Duties of an outpost.

Firing:

First day: Elementary firing.

Second day: Preparatory drill for actual individual firing in war with dummy cartridges.

Theoretical instruction:

Importance of the defensive; service of security; reconnoitering patrols; service of information and duty of patrols; gymnastics; wall scaling with the aid of ropes and poles; bayonet fencing.

Twelfth Week.—Use of pick and spade—first time, on the drill ground; second time, on varied ground; third time, on site selected for night exercises.

Drill:

Use of pick and spade.

Field exercises:

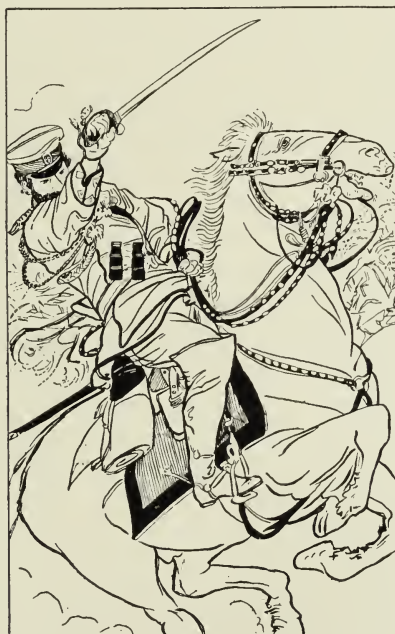
Almost every day with dummy cartridges—the section on the defensive; service of security; use of pick and spade; attack, defense and night assaults.

Firing:

First day: Elementary firing.

Second day: Preparatory drill for actual firing in war with dummy cartridges.

During this week there are no lectures, no gymnastics, nor bayonet fencing.



MILITARY INSTRUCTION IN THE HIGHER CIVIL SCHOOLS.*

TRANSLATED BY SECOND LIEUTENANT ROBERT COKER, TWELFTH INFANTRY.



BY the terms of the 23d Article of the Law of Recruiting, the students of the Normal High School, of the School of Forestry, the Central School of Arts and Manufactures, the National School of Mines, the School of Roads and Bridges and of the St. Etienne School of Mines, perform their first year of military service under the usual conditions, either before they enter the schools or after they graduate. They receive in these schools military instruction which fits them for the rank of sub-lieutenant of reserve. They then perform their second year of service as sub-lieutenants of reserve, if on the completion of their studies they have fulfilled the requirements of this rank.

In another article, in accordance with the Order of June 19, 1906, the branch of the service to which these young men are assigned is fixed as follows:

Normal School, School of Forestry, St. Etienne School of Mines, infantry.

The Central School and the School of Mines, artillery.

The School of Roads and Bridges, engineers.

Until the present time, as this law has operated to put into practice new designs, the application of which has been rather delicate, military instruction given in the higher civil schools has been along very broad and elastic lines, which have been determined by the minister of war, together with the ministers interested.

After a trial of two years, without yet being able to determine upon definite lines of work, it has become necessary to place this military instruction with which it deals on a firmer and more precise foundation. The war department has as a result published under the date of May 10th inst. a "Joint order on the organization and requirements of military instruc-

* From "*La France Militaire*," No 7644, May 25, 1909.

tion in the civil schools contemplated by the 23d Article of the Law of March 21, 1905." This order is sub-divided as follows:

Outline of the instruction to be given.

Examinations and military classification on graduation.

Material necessary in instruction (fundamental).

Reports to be made and temporary orders.

The essential points on which we believe that the attention should be fixed are the following:

ORGANIZATION.

This instruction is given in these schools by officers detailed by the ministry. It comprises:

FIRST.—A general instruction in organization, legislation, administration, topography, artillery, fortifications, tactics, hygiene, physical training and military correspondence; it is recalled that this instruction shall be limited to the most essential knowledge and shall be given with the intention of opening to the students the study of subjects which are necessary to the proper information of every officer.

SECOND.—Military and technical instruction, both theoretical and practical, including the study of army regulations and their application.

The end sought being the same—that is, preparation for the rank of sub-lieutenant of reserve, the Order of May 10th points out that the program of special courses of instruction for student officers of reserve (dictated by Article 24 of the Law of Recruiting and Instruction of September 14, 1908), describes in a general manner the form of instruction which should be followed in the civil schools. But it by no means follows from this that the order and conduct of instruction should be identical in both cases. Military instruction is, in fact, given in the civil schools (which is a cause of serious complication) to many young men, some of whom have completed their first year of military service before entering the school, while others will not serve this year until their graduation. It is, therefore, necessary to give to this instruction a form which clearly distinguishes between the instruction given to the soldier in his first year of service and that which can, without repetition, either precede or follow this regimental instruction.

The Order of May 10th prescribes in consequence that the practical military instruction shall be in the form of instruction

of cadets. It is proper to observe here, also, that the circumstances of time and necessary conditions with which military instruction in the civil schools must comply are most adverse. Distributed over two, three and four years of study, which only permit sessions of short duration, and which only occasionally allow the instruction of the students on the ground, this instruction should not be the same as that which in the special courses can be followed without interruption during a period of six months, but on account of the intellectual attainments of the students, and the high class of the theoretical instruction which can perhaps be given, there is every reason to expect that after the experience of regimental service they will make excellent officers of reserve.

EXAMINATION AND DISTRIBUTION INTO CLASSES.

There will be established in each school two distinct classes—the first composed of those students who have completed their first year of military service, and who shall be appointed sub-lieutenants of reserve on graduation from the school; the second composed of those students who have not completed their first year of service. Grade shall be determined by the marks given during the year and on the marks attained in the examination. The department order determines the mark of elimination, below which the student is declared not to have passed a satisfactory examination. The minister shall pass on each case separately. It is pertinent to note here, also, that any student who during his first year of service shall have been made the subject of report of the chief of corps, under Article 15 of the Order of October 23, 1908, shall be subject to a decision of the minister, who shall determine his appointment or non-appointment as sub-lieutenant of reserve.

FUNDAMENTAL PLAN OF INSTRUCTION.

The students of the great civil schools, with the exception of the School of Forestry, wear the military uniform during the term of instruction, their dress being regulated by the circular of August 3, 1908. The students who have completed their first year of service wear the insignia of student officers and have in the matter of exterior marks of respect the same rights and the same duties of student officers in the special courses.

Each school is attached to a corps of troops designated by the military governor, or the commander of the army corps of the district in which the school is situated, and this corps is charged with the duty of providing the military instruction needed.

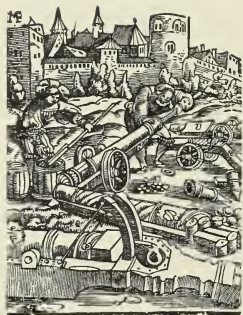
There is devised for each school a course of instruction which is observed and conducted by the corps to which it is attached. This course is maintained by a constant fixed distribution and by a personal distribution. Both vary in accordance with the duration of the studies, the effectiveness of the students and the branch of the service to which they belong.



A REVIEW OF THE SERVICES OF THE REGULAR ARMY DURING THE CIVIL WAR.*

BY MAJOR JOHN C. WHITE, UNITED STATES ARMY.

III. THE ARTILLERY.



AT this juncture, and in a period of semi-panic, the President once more having placed McClellan in defense of the Capitol, and Lee having withdrawn from in front of the city, the former moved out to follow in the early days of September, 1862.

"C"—"G," 3d, Capt. Gibson, with Edmund Pendleton, Henry Meinell and Francis Lowell Dutton Russell (4th Art.), all civilian appointees of '61, was involved in a sharp skirmish at Rappahannock Bridge, Sept. 8th and 9th; while Hains, who had succeeded Benson in command of "M," 2d, and was accompanied by Chapin, was busily silencing the enemy at Poolesville, that latter day, and again at Sugar Loaf Mountain, on the 10th, and, once more, in conjunction with Robertson's "B"—"L," 2d (Vincent being the lieutenant), as well as "C"—"G," 3d, again, at Catoclin Mountain, on the 13th. All this was upon Maryland soil.

At Middletown Clark's "E," 4th, with W. L. Baker (under Best, as chief of Willcox's divisional artillery), was demonstrating its customary effectiveness; while at South Mountain (or Turner's Pass) a fierce combat was being waged upon that same day—the 14th—which called upon the firing-line the batteries of "B"—"L," "E" and "M," 2d, "C"—"G," 3d, "B" and "E," 4th, and "C," 5th. Gibbons' old battery, "B," 4th, was in his own brigade, and is mentioned as having been "handled with as much precision and coolness as if on parade," while "F," 5th, under Lt. Martin, was performing its duties at Crampton's Pass at same time. Capt. Gibson and Lts. Benjamin and Stewart received especial commendation from their chief, Gen. Hunt, for "their excellent practice." The permanent establishment lost another distinguished member in Gen. Jesse Lee Reno, of the volunteers, at Fox's Gap, a mile distant.

These stiff fights were taking place at the passes through which the Confederate Army was being withdrawn from Frederick; and after the additional one at Sharpsburg Heights, on the 15th, in which Tidball's "A," 2d, with Lts. Pennington, Dennison and Clarke, the enemy fell back to a strong position.

All this was but preliminary to one of the most sanguinary conflicts of modern times—that of Antietam, on the 16th and 17th, in which Tidball's battery was the first to get into action.

*Continued from July number.

"I," 1st Art., under Lt. Geo. A. Woodruff, with John ("Dad") Egan and Tully McCrea, both graduates of '62—Kirby being absent, ill—crossed the creek on the night of 16th with Sedgwick, and was kept in reserve during the commencement of the battle; but under orders of Major Francis Newman Clarke (* '40), 5th Art., it was started at a gallop, along with a volunteer battery, to stem the tide when the division had been routed. Opening with canister at short range, and without infantry supports except the few stragglers who had been rallied on the flanks, that it was the only thing that saved them that day is the recorded belief of the gallant McCrea.

"K," idem, under Graham and the subalterns noted, was bravely and skillfully served, as recorded by McClellan; but after having silenced two opposing guns, found its smooth-bores unable to compete with the rifle guns of a battery upon its flank, and was directed to withdraw by Gen. Richardson who was mortally wounded while this was being done.

"E"—"G," while not so closely engaged as were the other two batteries of the regiment, being in reserve the first day, was sent on the 17th by Sykes to relieve Robertson, who was with the other horse-batteries with Pleasanton. After having driven a Confederate battery to a point beyond its range, the cavalry commander ordered its withdrawal from an unfavorable position where it was exposed to sharpshooters concealed in a neighboring cornfield.

Robertson's "B"—"L," 2d, which had been posted in the advance of the Antietam, was relieved, as we have seen, on account of its strenuous services of the day before, and on the 17th only a section under Lt. Vincent being actively employed.

"K," 5th, under Van Reed, had been sent forward for similar relief to Tidball's "A," 2d, which, with Weed's "I," 5th, had so valorously joined in the effective work done against Jackson near the Dunker Church. E. D. Muhlenberg's "F," 4th, also assisted ably at this crisis.

"D," 2d, now under Lt. Edward Bancroft Williston ('61), (Upton being the sub-divisional chief for Slocum) was, likewise, included in the commander's report as having been very accurate and effective in silencing opposing guns and in checking the infantry advance of the enemy.

"E" (idem) still under Benjamin, with his subalterns, Lord and Graves, was, as usual, busily engaged on the 16th near Sharpsburg with "10 or 12 pieces" of the enemy; and, after replenishing his caissons with as much as he could obtain, again went to work shelling the infantry; and after his ammunition was expended, maintained the fire with blank cartridges "for the moral effect" it might have.

Tidball, with his valuable assistants, Pennington, Dennison and Clarke, had been advancing "by piece" under a heavy fire to drive off the sharpshooters at the bridge. The success of their efforts had obtained positions for Robertson, and for Hains and Chapin, with "M," as well as for itself; and from whence they all opened with great effect for over two hours. Relieved for further supply, as noted, they returned later in the afternoon, when they renewed the fight with increased vigor. Gibson, with "C"—"G," 3d, and officers, had, in the meantime, joined the others to cover the bridge. Pleasanton, to whom these several horse-batteries were attached, mentions, by name, these officers for distinguished service. The former commander of the "West Point Battery," Henry Walter Kingsbury was mortally wounded, as colonel Eleventh Connecticut Infantry.

"A"—"C," 4th, under Lt. Evan Thomas, appears to have been separated into its component parts during the engagement, as only the

report of the participation of "A" is furnished by that officer; it having occupied a position close to "I," 1st, where, after opening with spherical care, and, afterwards, with shot, it would undoubtedly, he states, have been lost (being without infantry support) had not Franklin's column come up at the critical moment.

Stewart's section of "B," 4th, had gone into the action under the direction of Gen. Gibbon, where, later, it was joined by the balance of the battery with its captain, Campbell, who was soon severely wounded, and Lt. Stewart, now in command, was directed to conform his movements to those of "C," 5th. The losses sustained were very heavy.

"E," 4th, had lost both its officers—Capt. Clark being wounded no less than four times and Lt. Baker being killed while the battery was inflicting great damage upon the enemy where it was serving with Sturgis' (2d) division of the Ninth Corps.

"F," idem (E. D. Muhlenberg), and "G," idem (M. P. Miller), did not become engaged. "A," 5th (C. P. Muhlenberg), (Ames having been appointed colonel of volunteers), was actively employed with Rodman's division. Ransom's "C," idem, which was actually commanded by Henry Sanford Gansevoort, with Gulian Verplanck Weir—both from civil life in '61—acting under Hooker's orders received a most gratifying tribute from Gen. Meade. "D," under Hazlett, still with Morell's (1st) div., 5th Corps, was so fortunate during the engagement as to recover one of those guns it had lost at First Bull Run. Ayres' "F," under Martin, was, as usual, in the thick of the fight, serving with its (2d) div. Sixth Corps, and where it retained a very important position until the enemy was found to have retreated. Both Ayres and Ransom discharged their duties as chiefs in their respective brigades. Gen. Irwin's tribute to Lt. Martin is a matter of record. The batteries of Weed's "I," under Watson, and of "K," under Van Reed, were among those that executed so effectively against Jackson's right, near the Dunker church, as that Confederate commander has acknowledged. Gen. Hunt had now become Chief of Artillery for the Army of Potomac and Gen. Barry was Inspector-General for the artillery of the U. S. Armies. Capt. Edward Raynsford Warner (* '57) was acting as assistant adjutant-general for Gen. Hunt, and as his sole staff officer is referred to by his chief as "indefatigable, valuable and courageous," while to Lt. Wm. Duncan Fuller, also of the 3d Art., he gives great credit for his "organization and conduct of the ammunition train." Capt. Graham and Lt. Elder he recommends for brevets.

Lt.-Col. A. S. Webb (now a Capt. 11th Infantry) as A. I. G. on McClellan's staff was distinguished for his brilliant services in the line of his duties.

The desperate attack contemplated by Jackson, for which the potential prelude in the tornado of shot and shell had swept over the Union lines about 5 p. m., had been abandoned when the Confederate commander recognized that the judicious massing of 30 guns in Hooker's Corps "rendered it inexpedient to hazard the attempt," to quote Jackson's own words once more.

The Union losses among the higher ranking officers had been exceptionally great; the veteran, Gen. Mansfield, heading the list.

The Army of North Virginia having retired across the line, that of the Potomac followed, while various skirmishes incidental to the movements of the two forces; at Williamsport, on the 18th Sept., where "M," 2d (Hains), was in requisition; while around Shepherdstown and vicinity, on the 19th and 20th, the combined batteries of Tidball, Robert-

son, Gibson, Hazlett, Watson and Van Reed were constantly called upon to repulse A. P. Hill's command.

From the 20th to 23d detachments from "F" and "K," 3d, were actively engaged at and around Ashby's Gap, while the sections of "M," 2d, under Pennington, Dennison and Clarke, respectively, were kept at work around Shepherdstown and Martinsburg, Va., Oct. 1st, and on the 12th at Nolan's ford of the Monocacy, Md.; at Philomont, Va., Nov. 1st; at Union and Upperville, Nov. 23d; at Barber's Crossroads, Nov. 5th; at Union, again, on the 7th; at Upperville, also, on the 8th; at Chester Gap on the 9th; and, yet again, near Amisville, the following day, along with Tidball's "A," and the cavalry. On the same date "E," 4th, under Dickenson, with Egan, 1st Art., became engaged at Culpeper Courthouse.

Burnside having been appointed to supersede McClellan, in the attempt to cross Sumner's infantry, was protected by the 147 guns skillfully posted by Hunt on Stafford's Heights, but during the opposition made by Barksdale's Mississippi sharpshooters to the laying of the pontoon bridge by the engineers, the salient incident was the heroic passage of a volunteer force headed by Col. Norman J. Hall, 7th Mich.; a former lieutenant 5th Art. (* '59), "E"- "G," 1st, Randal, with Olcott and David Essex Porter ('61), crossed on the 12th (Dec.), and was held in reserve in the city streets; while "I," idem, under Kirby, with Woodruff, G. A., and McCrea had gone over the night before, and was stationed in the outskirts, in rear of the line of battle. "H," idem, under Justin E. Dimick (2d cl. * '61), followed on the 13th, and was also placed in position near the town. Neither of these batteries were called into action, but being under heavy fire suffered in consequence. Lt. F. S. French, 1st Art., acted as an aide to Gen. Hunt throughout the battle. "A," 2d (Tidball), was with the reserve; "B,"-"L," under Vincent, with the cavalry brigade (Averell); attached to 6th Corps was "D," under Williston, in Ayres' artillery brigade; "G," under Jno. H. Butler was with Newton's (3d) Div., in W. F. Smith's 6th Corps, "C," 3d, Gibson, was with Bayard's Cavalry Brigade and had Meinell and Jas. Madison Lancaster (* '62) as subalterns; Brownson serving on staff of Gen. Hays; "F"- "K," idem, under Turnbull, was in Livingston's artillery brigade of Birney's (1st) Div., 3d Corps; and "L"- "M," 3d, under Horace John Hayden ('61) was with Burns' (1st) Div.; Willcox's (9th) Corps. "A," 4th, under King, with Canby and Arthur Morris ('62); "B," idem (Stewart), with Jas. Davidson (Army '62), 5th Art., was with Doubleday's (1st) Div., Reynold's (1st) Corps; "C," idem, Evan Thomas and Field, with Hancock's (1st) Div., Couch's (2d) Corps; "E," idem, Lt. Geo. Dickenson ('62), succeeded by Egan (1st Art.), after he was killed, was with Sturgis' (2d) Div. of Willcox; while "K," idem, under Seeley, who had Isaac Arnold (* '62) as well as Bancroft as lieutenants. "G," idem, Capt. Miller, with Merkle and Thompson, was not called into action. "A," 5th, Gilliss, with Crabb, was temporarily attached to Getty's (2d) Div. of the 9th Corps; Ransom's "C," with Meade's (3d) Div. of 1st Corps; after service with Reynolds, crossed the river and performed gallant service in Franklin's attack; "I," under Watson, crossed on the 13th, together with "A," and remained in the town during the fight. "F," under Martin, had also gone over when Ransom did, and was the recipient of a handsome tribute from Gen. Howe for its services.

"In order to control the enemy's movements on the plains; to reply to and silence his batteries along the crest of his ridge; to command the town; to cover and protect the throwing of the bridges

and the crossing of the troops; and to protect the left flank of the army from attacks in the direction of Massaponax River, it was necessary to cover the entire length (of Stafford Heights) with artillery, posted in such positions as were favorable for these purposes. The reserve artillery was not strong enough for this object and therefore some of the divisional artillery was withdrawn from the service with the troops and temporarily attached to the reserve, which was arranged in four large divisions." (Hunt.) On the right, under Hays, were "E," 2d (Benjamin); "A," 4th (King); and "D," 5th (Hazlett); in right center were "K," 1st (Graham); "G," 4th (Miller), and "K," 5th (Kinzie); in left center was the 1st Conn., heavy art., under Col. Tyler, while, on the left, were the valiant volunteer batteries under Capt. Gustavus A. De Russy, 4th Art. Such others, with the regular batteries as enumerated, made up the 147 guns. Jackson, in his report, testifies that "the artillery * * * was so judiciously posted as to make an advance of our troops across the plain very hazardous," and gives this as the reason for not having followed up the repulse which he gave to part of Franklin's force.

After the failure of the desperate assaults on the heights occupied by the Confederates, the batteries, upon the retirement of the infantry, performed most efficient work, in which "C" and "F," 5th, took a conspicuous part. The only Regular artillery officer killed had been the gallant Dickenson. Capt. Gibson was within a few feet of Gen. Bayard, his friend, when he received his mortal wound.

Burnside having been persuaded to abandon the renewal of the attack which he had ordered, the Federal troops were withdrawn on the night of the 15th, and returned to their camps at Falmouth. Geo. Amos Kensel (* '57) was now the captain of "H," 5th, through the death of Terrill, but soon transferred with Guenther and assumed charge of the divisional artillery; the battery having encamped at Murfreesboro, was not called into action again until the last days of June, when it marched to Hoover's Gap, under Thomas, and on the 25th and 26th engaged the enemy in successful maneuvers which turned Bragg's right flank.

"I," 4th, under F. G. Smith, with Rodney and Stephenson had been in active service at Chapel Hill, Tenn., May 3d, with some trivial affairs earlier in the season—at Traino, March 3d, and Harpeth River on the 8th. While these few representative Regular batteries were resting and refitting for the projected Chattanooga campaign, we will resume our notice of those in the south that were merged in the Port Hudson siege, which had lasted until 8th of July. Those were "A," 1st, Bainbridge; "F," Duryea, and "L," Closson, with the subalterns already given. "C," 2d, Rodgers, and Rich'd Arnold's old battery "G," 5th, commanded by Jacob Beekman Rawles (* '61), who had surrendered his regimental quartermastership in order to take the field with it, and of which he retained the command until the very close of the war. He had at this time an assistant in Elijah Rosencrantz Craft ('61). In both the assaults that were made upon the fort these batteries were hotly engaged, and until its surrender, when Rawles' battery remained to assist in the rehabilitation of the works, until the fall, when it returned to New Orleans. Arnold himself was chief of artillery for Gen. Banks. At the Crescent City were also Larned's "H," 2d, and Allen's "K" (idem), posted in the defenses. Bainbridge having been assigned to his own regiment ("K," 5th), Lt. Humphrey was left in command of "A," 1st; while Duryea, being detached, with Lt. Norris on leave, left the command of "F," idem, in the hands of

Lt. Haskin, and that of "L," in those of Taylor, through Closson being chief of the divisional artillery. Lt. Theodore Bradley (Army '61) succeeded to that of "C," 2d, through a similar position having been awarded Capt. Rodgers.

Lt. Taylor, with a section of "L," 1st, had been embroiled at Donaldsonville (below and opposite Baton Rouge), but met with no loss.

"L," 1st, after being rejoined by its detached section, and being in action at another affair near Vermilion Bayou, Oct. 9-10th, reunited with the others at the metropolis.

In the meantime, "B," 1st, with a detachment of 40 men from "C," had assisted in the assault on Morris Island, S. C., July 10th, and in operating against Batteries Wagner and Gregg from July 18th to Sept. 7th; which operations had to be suspended through the absence of the expected support of the navy. The command of the contingent from the 1st was exercised by Lt. Henry, whose assistants were Porter, Sanger, Tully and Gibbs T. K.; while with that detachment from "C" was James Eveleth Wilson (* '62), 5th Art.; the 3d Art. being represented by "E," commanded by Jno. Reucklin Myrick ('61).

On the 28th July, "L," 4th, Capt. Howard, with Lts. Hasbrouck and Bucher, encountered a hostile force at Jackson, N. C. There appearing to have been no further operations of importance in this particular field for these batteries throughout the remainder of 1862, we will hark back to the Army of the Potomac, recuperating in the Falmouth camp. The monotony of a winter cantonment had been broken for "D," 4th, Capt. Fred'k M. Follett (* '50), with Lts. Stephen Whitney and Bayard Wilkeson (both of '61), in an encounter at "Deserted House" (Kelly's store), Va., on Jan. 30th, at a time when Lee had detached Longstreet with half of his corps to operate beyond the James River, in the direction of Suffolk (an outlying position near Norfolk), the siege of which, calling for the services of the same battery, together with "L" of the regiment, under Hasbrouck, assisted by Hunt and Bucher. Also, "A," 5th, Gilliss, with Crabb. These three batteries shared in the toilsome work from April 12th-May 4th, when Longstreet withdrew.

At Kelly's Ford, April 14th, "E," 4th, commanded by Lt. Sam Elder, 1st Art., with Jno. Egan, idem, and Wm. W. Williams (Army '62) of the 5th was connected with the cavalry affair; and on the 16th the services of two sections of "M," 2d, under Robt. Clarke and Carle Augustus Woodruff ('61), and Frank Brown Hamilton (* '62), were required at Rappahannock Bridge.

Stoneman's raid, beginning April 29th and lasting a week, had been preceded by cavalry skirmishes at Fitz Hugh Crossing (Pollock's Mill Creek or White Oak Run), in which "B," 4th, under Stewart with Arthur Morris and Jas. Davison, 5th Art., played a notable part. During the continuance of the raid, Tidball's "A," 2d, and sections of "B"—"L," under Vincent, and of "M," under Woodruff, and of "E," 4th, under Elder, with Egan, 1st Art., and Williams, 5th Art., were constantly called into action at the different localities involved.

We are now abreast of another lamentable experience for this long-suffering army of willing fighters—the fruitless carnage of Chancellorsville, May 1-3, 1863.

Another change of its commanders had brought Joseph Hooker to the fore—him of "fighting" soubriquet—and the army was moved by its right across the river in April. Through a clever movement he placed himself on Lee's left flank, but the latter as skillfully and daringly detached Jackson to pass by his opponent's right and to cut him off from

the United States ford. Heavy rains had been delaying Stoneman, and Hooker's original plans became seriously deranged, and his own inexplicable physiological changes intervened to neutralize initial successes and advantages of position, to culminate in a deplorable disaster. Only the enumeration of the batteries that were engaged more or less during the three days' battle can be given in this space. Besides those already designated with the cavalry there were "F," "G," 1st, Capt. Randol, detached from Humphrey's (3d) Div., Meade's (5th) Corps, and sent to Sykes' assistance when he was bearing such a brunt of the attack, and where it assisted in checking the enemy's advance, and, later, established in position with the others at Chancellor House, when Randol was given command, while Weed was discharging his duties as chief of the corps artillery. Here they remained "idle but indignant listeners." "H," idem, under Lt. Dimick, with Jas. A. Sanderson (* '62) and Philip D. Mason ('62) went "into battery" with 2 guns near the House—the remainder in the rear—upon an elevation that allowed its fire to be delivered over the advanced section, and where Capt. Best, as Sickles' chief of artillery, "with marvellous energy" (according to that commander), had posted 30 pieces, which met the yelling foe with canister and shell; and "the grand *coup de main* of Jackson had been checked." The engagement lasted until 10 P. M., and, even during the night, the artillery did not rest; and early the next morning (3d), the attack was renewed in force, handfuls of determined Confederates rushing up to the very muzzles of the guns, only to be swept back, leaving long lines of dead." By 6 o'clock A. M., having expended all its ammunition, "K," 4th, under Seeley, with Isaac Arnold, 2d Art., and Robt. James (Army '63), was ordered to take its place. In supervising the withdrawal of his guns, Lt. Dimick was mortally wounded, and Lt. Arnold was also wounded during the attempted exchange in an exposed position. Lt. Sanderson, in the face of the furious fire, taking a limber, brought off an abandoned gun; and Seeley succeeded in removing "the harness of 30 or 40 horses, leaving no trophy of his battery on the field except the memorable loss it had inflicted on the enemy," according to Sickles, who also declared that "Dimick had won the applause of commanders and comrades by his brave conduct."

"I," idem, under Kirby, with Geo. Woodruff, McCrea and Egan, had been mainly held in reserve in the earlier stages of the battle, but on that last day, Kirby having ridden over to the left, where he heard heavy firing, was placed by Gen. Couch in command of a Maine battery which had lost its officers, where he received a wound which, from want of proper treatment, caused his death within the month. His "heroism" was especially expatiated upon by his chief, C. H. Morgan, himself so distinguished for gallantry and brilliant services.

"K," 1st, under Lorenzo Thomas, Jr., with Maynadier and Von Michalowski—its captain, Graham, being the artillery chief for Tyler—was posted at Banks' Ford, in reserve, until the 4th, when it became engaged, but meeting with no loss but a few horses.

Besides the batteries of the 2d that were with Stoneman, "D," under Williston, with Chas. Nelson Warner (* '62), was most efficiently employed, doing some splendid execution on the 3d, until relieved, after dark, by "G," idem, under Lt. Jno. H. Butler, whose services were attested as being most important in the final check to the victorious foe.

Of the 3d Art., "C," under Meinell, was held in reserve, while "K," under Turnbull, with Wm. Clarendon Cuyler ('62), when detached

from Birney's (1st) Div. of Sickles' Corps, came most opportunely into position directly in the way of fugitives from the shattered 11th Corps, being most noteworthy both in checking their flight as well as further successes of the Confederate force. Lt. Geo. Forrester Barstow ('61), 3d Art., was in command of 4th N. Y. Light Battery and Capt. E. N. Warner was still serving on Hunt's staff.

Here the intrepid Franklin Butler Crosby ('61) met a soldier's death while in command of "F," 4th (Muhlenberg being in charge of the artillery in another division), in which he had been seconded by Robt. Floyd and John McGilvray, both promotions from the ranks that year. Lt. Alonzo Hersford Cushing ('61), with "A," idem, was in the reserve; while "C," idem, under Evan Thomas with Edward Field received commendation from Hancock and Morgan for its execution; a volunteer lieutenant serving with the battery was killed. Ransom was acting as artillery chief for Robinson's (2d) Div., Reynold's (1st) C., while his battery "C," 5th, had been associated with "B," 4th, in the group of batteries on the front and right of the army. "D," idem, under Hazlett, was not at first engaged, but later became actively so while serving with Griffin's (1st) Div., 5th Corps. "I," idem, under Watson, fell into serious difficulties when upon a forced reconnaissance with Sykes' division, whither it had been sent with its own (Hancock's) division, to extricate the former from the critical condition it found itself through the orders to retire having failed to reach that part of the command. The battery was of material helpfulness in aiding to hold on until the arrival of requisite reinforcements and in effecting a safe retirement. Later it formed one in the group near the Chancellor House, from whence the jubilant victors were finally repulsed. Its commander, Capt. Weed, was made a brigadier of volunteers for his skillful handling of his batteries on this occasion, but Fate had decreed that he was to wear his honors for but a few fleeting weeks, and with Cushing, Wilkeson, Hazlett, Woodruff and Williams to add to the "Roll of Honor." "K," Kinzie, was held in reserve. "F," still under Martin (Ayres now a volunteer brigadier in command of the Regular infantry), with Chas. Simon and Alex. Jas. McDonald (both Army '62), once again covered itself with glory for its attested services.

The Confederate commander now determined to take advantage of the condition in which the opposing force had been left after these two disasters, and of its still further depletion through expiration of short enlistments and to carry the seat of war in the east, into the enemy's own country, while the defeated Union Army was again resting in its thrice occupied Falmouth camp.

So soon as Hooker discovered the nature of Lee's movements he started his army for the Potomac and concentrated it at Frederick, Md., where Meade was directed to relieve him towards the end of June.

In the meanwhile "L," 4th, under Hasbrouck, with Hunt and Beecher, had encountered the enemy at Carrsville, near Franklin, Va., May 16th, and again, on the 24th, had another brush with them on the Petersburg R. R., with the assistance of "D," same regt., Capt Follett.

While at Bernard's House, June 7th, "F," 5th, under Martin, met with an encounter, and at the big cavalry fight at Beverly ford, on the 9th, the horse-batteries, "K," 1st, Graham, with the same lieutenants as before; Robertson's "B"- "L," 2d, under Edward Heaton ('61), with Vincent; Tidball's "M," idem, under Pennington, with Carle Woodruff; Gibson's "C," 3d, under Fuller, with Meinell; and "E," 4th, under

Elder, with his two designated subalterns, were able auxiliaries in the combat.

Chalfin's "L," 5th Art., which had been stationed near Baltimore since its organization, and from whence it had been detached to head off Stuart's raid during the Antietam campaign, now joined Milroy's division in the valley, under the command of Lt. Wallace F. Randolph ('61). After having participated most creditably in some minor affairs, from the 12th to 14th June, upon the latter day, at Winchester, Va., it found itself so faultily posted by the orders of Milroy that, without adequate support, it was absolutely sacrificed, losing all its equipment, and its wounded commander by capture after three horses had been shot under him; his only other officer, Edmund Dana Spooner (Vols. '61), and 18 men being able to effect their escape.

From now on, up to the crucial conflict at Gettysburg, to which it all was culminating, there was an almost daily necessity for the co-operation of the batteries with the cavalry columns, as at Thoroughfare Gap; June 14th, for "K," 1st, Graham and "subs.," at Aldie; on the 17th for "E"- "G," idem, Randol, with Chester, 3d Art.; for "A," 2d, now commanded by Jno. Haskell Calef (* '62), with Jno. W. Roder (Army '62), and for a section of "C," 3d, under Lancaster; at Franklin, for "D," 4th, Follett, with Whitney and Thompson, and for "L," idem, under Hasbrouck, on the 18th June; while, at same date, and the day following, Graham and Lancaster were again at work at Middlebury; the former, once more at Ashby's Gap, on the 21st, and where, at Middlebury, and at Upperville, Randal, Pennington and Meinell were busy; and also in a rear-guard engagement on the 22d, "A," 4th, under Cushing (A. H.), with King and Canby, encountered the enemy between Thoroughfare Gap and Haymarket, on the 25th, and on the last day of June, at Hanover, Pa., "M," 2d, under Pennington, with Carle Woodruff, and "E," 4th, under Elder, with Williams, indulged in the final set-to before the Titanic struggle of the morrow.

"While the horse-batteries were marching with the cavalry column in the advance, the foot-batteries attached to the different corps were accompanying them in the grand strategic movement through Eastern Virginia and Maryland." (Calef.)

As a simple epitome, there can only be a superficial sketch of the services of the Regular batteries represented at this high-water mark, when the tide began to turn for the Army of the Potomac. "E"- "G," 1st, officered as before, was not in action July 2d, but on the 3d, while moving in support of the 12th Corps, it was detached to support a cavalry movement of Gregg's, on the extreme right, and was here divided; Randol, with one section, accompanying one cavalry brigade, and Chester another, becoming an active participant in the final brilliant action that ensued between the rival cavalry forces, a volunteer lieutenant ably assisting. Foot-battery "H," idem, from the Reserve (which at first was commanded by Col. Tyler, but after his injury by Robertson), under Lt. Eakin (still suffering as he did until the day of his death from the wound received at Williamsburg), with Mason and Sanderson had taken position in front of the Cemetery, under a terrific fire, where Eakin was again struck down with a severe wound. Here the battery remained during the continuance of the battle. "I," idem, under Woodruff (G. A.), with McCrea and Jno. Egan, was posted on the line of the 2d Corps on the second day, escaping there material loss, but on the occasion of the last furious grapple, at high noon on the 3d, in Ziegler's grove, where the final terrific test was imposed, they grandly measured up to it, as is the testimony of their superiors and volunteer

comrades. The chivalrous Woodruff was killed, and the battery was cut almost to pieces. The surviving officers were highly commended by Hunt and Hancock.

Horse-battery "K," idem, had been placed on the extreme left of Little Round Top on the 2d, where it was confronted by Hood. Attached as it was to Buford's cavalry brigade, it was engaged in assisting to repulse Longstreet's attempts to turn the left of the Union Army, as well as in obtaining possession of the Baltimore pike on the 3d, but was fortunate in meeting with but few casualties. Its services were handsomely acknowledged by Merritt and others. Capt. Graham had exercised command, while his lieutenant, Michalowski, was at one period detached with a section.

"A," 2d, under Calef, with Roder, which had accompanied Buford's column as an advanced guard, along with the above, had reached Gettysburg June 30th. On the 1st July it aided in holding A. P. Hill's Corps at bay until the arrival of Reynolds' (1st) Corps, thus fulfilling its part of "outpost" duty, and in saving the strong position which the army established, by degrees, from Culp's Hill to the Round Top. It later rejoined Buford, who attests its grand service.

"B," "L," idem, under Heaton, with Vincent, was badly handicapped with defective ammunition, and which materially affected its customary efficiency while serving with Pleasanton's command.

"D," idem, under Williston, and its sister battery, "G," under Jno. H. Butler, were with Wheaton's (3d) division of Sedgwick's 6th Corps, and were not, during the first two days, subjected to the brunt of the battle, but on the last day Williston was so posted as to get in his work upon Pickett's exposed right flank, in conjunction with the splendid volunteer batteries.

"M," idem, under Pennington, with Woodruff (C. A.), Clarke and Hamilton (F. B.), found another opportunity to distinguish itself in the final tilt between the cavalry forces, when Stuart's charge, on the 3d, in co-operation with that of Pickett, Pettigrew and Wilcox, and of which Pennington ably availed himself by the disposition of his guns; the section of Woodruff being placed a short distance on the left of that of Clarke, forming an "L" with it, where they knocked out several batteries brought against them; and in conjunction with Randol, Chester and the Volunteer (Kinney) rendered the Confederate chieftain's valiant effort abortive.

Horse-battery "C," 3d, Fuller, with Meinell, Kelly and Lancaster, was with Huey's cavalry brigade, but not called into action.

Foot-batteries "I," "K," idem, under Turnbull, with Manning Livingston ('62), was furiously engaged, while with Humphrey's division, in that determined attack upon Sickles' exposed flank by Longstreet on the 2d; and where, while posting Turnbull in the relief of Seeley's "K," 4th, Ransom, as chief of the 1st (Regular) Brigade of the Reserve, was severely wounded. When the infantry fell back the batteries, retiring with them, suffered heavily in men and horses; its lieutenant, Livingston, being killed.

Of the 4th Art., "A" was probably the most seriously damaged, where it had been posted on the right of Webb's fine Penna. (2d) brigade of Gibbons' (2) Div., Hancock's (2d) Corps, which was at the very apex of the Confederate onslaught. Here its courageous commander, young Alonzo H. Cushing, fell dead among his men, and his lieutenant, Canby, being severely wounded, the command devolved upon its 1st Sergt. Fred'k Fuger, who discharged the responsibility with such ability and spirit that he was shortly rewarded with a com-

mission which he ever filled with the greatest credit. Both Gens. Hancock and Hays are on record as to the magnificent work of this battery. "B," idem, under Stewart, with Davison, who were both wounded, had accompanied Doubleday's (3d) Div. of Newton's (1st) Corps (Reynolds having been killed on the 1st), and was constantly in action. Its general refers to these "oft-distinguished officers," while its corps commanders share in the hearty praise of its services as rendered.

Foot-battery "C," idem, under Evan Thomas, who is "particularly mentioned for bravery and good conduct" by Hancock, had largely contributed to the successful repulse of the resolute assaults on the 2d. His subaltern had been John McGilvray (Army '63).

Horse-battery "E," idem, still commanded by Elder of the 1st Art., with Thos. Williams, Jr., of the 5th, does not appear in the activities, but foot-battery "F," idem, officered by Sylvanus T. Rugg and a gallant volunteer, was frequently called upon while attached to Geary's (2d) Div. of Slocum's (12th) Corps; Lt. Muhlenberg, E. D., acting as chief for the artillery of the division; Gen. Hunt reporting upon its "excellent service." "G," idem, having arrived with Schurz' (3d) Div. of Howard's (11th) Corps, had been posted, during the last phase of the contest, at the Cemetery, where, under a fearful fire and in an exposed position, its youthful but heroic commander, Bayard Wilkeson ('61), fell with mortal wounds, the charge of the battery passing to Bancroft. The other subaltern, Cristopher Fred'k Merkle (Army '62), had been detached with a section on the 1st for special service.

"K," idem, under Seeley, with Rob't James, and a volunteer from the 5th N. Y., was handled in the usual lion-hearted and efficient manner of that officer, until after being wounded he was obliged to relinquish its command. His chiefs, Sickles and Humphreys, bear testimony to his capacity and valor.

When Sickles' line had been forced back to the main one, on the 2d, "C," 5th, having been placed on the right front of his corps, maintained a vigorous cannonade until it ran out of ammunition, and its commander, Lt. Homer Hine Baldwin ('61) had been wounded and succeeded by Gulian Verplanck Weir ('61); in attempting to retire for replenishment 3 of its guns were lost after being disabled but were subsequently recovered.

"D," idem, under Hazlett was performing yeomen service, on the 2d, in supporting the force that the prescient Warren had so hastily but opportunely gathered up to hold Little Round Top, when both the former and his chief, Weed, received mortal wounds at the hands of a sharp-shooter, and the command passed to Rittenhouse, under whom it continued to prove worthy of its previous record; and on the 3d was especially capable by its enfilading of Pickett in forcing that charge to change its direction to its disadvantage.

"F," 5th, under Martin, still appears to have some respite from the customary demand upon it during the three days' wrestle; but "I," idem, under Watson, with McConnell, having been seized upon by a staff officer of Sickles, in that general's extremity, was ordered into position without any support on the line of the shattered 3d Corps and its commander was soon wounded, after which McConnell fought it until "men and horses were shot down, or disabled to such an extent that the guns had to be abandoned." They were, however, recaptured by the daring act of Lt. Sam'l Peeples (Army '62), at the head of equally intrepid volunteers. After it was all over, the exhausted battery had to be sent to Washington for re-equipment.

"K," idem, under Kinzie, had been attached to the 12th Corps, and furnished particularly important assistance on the second day. Van Reed's section securing especial commendation therefor, as well as his assistant, Wm. Egan (Army '62), attached from the 2d Art.

"The splendid performance of the foot-batteries at Gettysburg, as well as their powers of endurance, has never been placed sufficiently in relief, and they have never been given the credit which was their just due for the part which they took in this battle." (Haskin.)

Hunt had arranged his artillery in four divisions, for any point of attack, and awaited the onslaught that third day. The rifled guns, in a number of cases not using canister, were withdrawn from the line, and the double-shotted 12s were left in their stead. All of the reserves, under Col. Tyler—in which was the brigade of Regular foot-batteries, under Ransom—were parked for quick replacement of such as became disabled; and "when those 140 hostile guns opened, all at once, on the Union lines at 1 o'clock, the air fairly shrieked with flying shot." "Receiving in silence" this most destructive cannonade, no sooner does the time come to open in reply than every piece is used in the most effective manner." * * * And "had it not have been for the thoroughly efficient manner in which the batteries performed their duties, the charge of Pickett's Division would have been a success." (Haskin, page 171.)

It will have been noticed, doubtless, that these batteries were, in almost every case, under the direct command of lieutenants, mainly very young men; their captains being in discharge of larger responsibilities; while they were vieing with such splendid volunteer organizations as Cowan's, Rorty's, McGilvery's and the others, to which they stood about in the proportion of 1 to 6.

Recognition will, also, have been probably made by survivors of what was referred to by the writer, in the Introductory paper, as to the deplorable misjudgment in having commissioned certain brave soldiers, who lacked balance, to enable them to fill and retain their new rôles. There can be nothing more regrettable than the ending of some of those gallant fellows!

When it is fully realized that there were no less than 28 Regular batteries credited with service at Gettysburg, changing relation with commands and positions frequently during those three days, and that from then until the close of the year they were called into some 30 actions, the comparatively greater length of the review devoted to their services will be better understood.

After the repulse of Pickett and his supports, which virtually ended the battle, some of the foot-batteries were employed in following up the retreat of Lee's Army, while the horse-batteries were operating with the cavalry, which had won such notable distinction upon both flanks.

These chief events in the history of the Army of the Potomac, for the balance of the year, covering the pursuit of the retiring Army of North Virginia, so far as the Regular batteries were concerned and recorded, are comprised in a skirmish at Smithsburg, Md., on July 5th, while accompanying Kilpatrick, for "C," 3d, under Fuller; a section of which, under Meinell, was "severely engaged" the following day at Williamsport, and the battery as a whole again at Boonsboro, on the 8th, and from the 10th to 11th near Funkstown it was kept at work.

At an affair near Williamsport, "K," 1st, under Graham, with Buford's column, was after the confederate ammunition-train, which had been reputed to be crossing at that ford; in which attempt, though unsuccessful, he was supported by "A," under Calef, and "M," Pennington, both of the

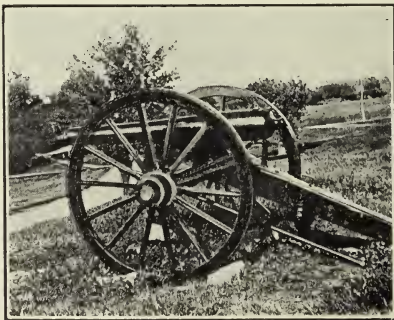
2d. At Hagerstown, the same day, Elder, with "E," 4th, and again at Boonsboro, was in evidence; and when Graham's services called forth both Buford's and Merritt's expressions of admiration, while Custer and Kilpatrick bestowed liberal commendations on Elder, Pennington and Hamilton, F. B. That Calef was fully sustaining the reputation of Tidball's battery was handsomely certified to by that chief, and the brigade and division commanders.

In the several fights near Funkstown, 9th, 11th, Calef, with Roder; Fuller, with Meinell, Kelly and Lancaster, and "B," 4th, under Davison, 5th Art., did excellent execution. "B"- "L," 2d, under Heaton, had been supplied with such defective ammunition as to seriously detract from its general efficiency.

Near the battle-field of Antietam, "C," 3d, found itself again required in an action on the 10th, while "F," 5th, under Martin, was placed in battery at Cavetown. On the 12th, at Hagerstown, "M," 2d, was again in requisition at Falling Waters, Va., in a cavalry affair of large proportions which required its support and that of "B"- "L," idem, under Heaton.

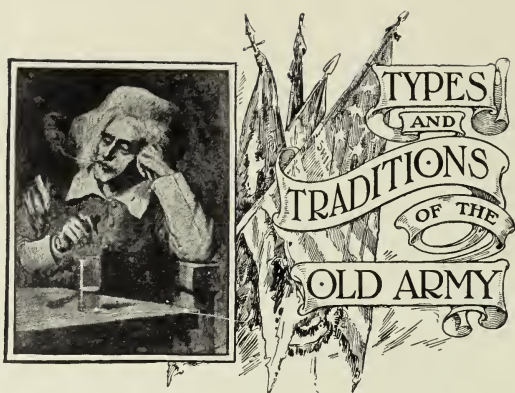
A section of "C," 3d, under Kelly, and a section of "E"- "G," 1st, under the gallant young volunteer, Kinney, were engaged at Shepherds-town on the 16th. "B"- "L," again, on the 18th, when Heaton was accompanied by Vincent, with Merritt's column, was striving to hold Chester Gap, while Longstreet was moving up the valley across the Blue Ridge. At Battle Mountain (or Newby's Crossroads) a section of "M," 2d, under Carle A. Woodruff, received great credit from Custer for extricating his guns from a "perilous position," with but slight loss, and for which distinguished act that young officer later received a medal of honor. The battery itself was engaged, the following day, at Annisville.

[TO BE CONTINUED.]



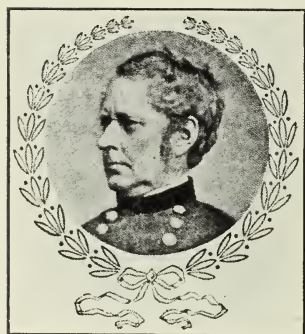


EQUESTRIAN STATUE OF HOOKER,
State House, Boston.



MAJOR-GENERAL JOSEPH HOOKER AND HIS PROPER PLACE IN HISTORY.

BY LIEUT. G. A. TAYLOR, C. A. C., UNITED STATES ARMY.



BY some strange anomaly Hooker has not yet been accorded, by the world at large, his proper place in the history of the War of the Rebellion. Mention the name of Hooker in any gentlemen's club, and you will be surprised at the comments. Sometimes there is even the tawdry joke, a thoughtless gibe, or a play upon his name. We, as a people, are too prone to bandy with the reputations of great soldiers, but the deeper the knowledge of history that a man possesses, the less is he given to groundless criticisms. Hooker has never had his biographer, but that task is for a worthier pen than this. I confess that I do not write dispassionately of Hooker. I was brought up to venerate his memory. As far back as the Revolutionary War, his ancestor and the writer's served in Colonel Porter's Hampshire County Regiment, and the writer is proud of the fact that there exists also a tie of blood relationship, which is of somewhat more recent date.

Hooker has come in for more than his share of criticism. It once pleased Mr. Elbert Hubbard to make much of Mr. Lincoln's famous letter to Hooker. The only object of this article is to attempt to refute such aspersions upon the character of as fearless an officer as ever led his troops into action, and, if possible, to put him in the light he so richly deserves.

As has been previously stated, Hooker's biography has never been written, and he did not write his autobiography. Hence it has been

necessary to gather the following data from varied sources, from many different authors, and in some cases from men who served under him. For these different sources I shall endeavor to give proper credit, as far as possible, and here desire to express my indebtedness.

Joseph Hooker was born November 13, 1814, in the historic old town of Hadley, Mass., where, the legend says, Goffe, the regicide of Charles the I, passed his last days. In this beautiful old New England village the general passed his boyhood days. A massive boulder, erected by the Daughters of the American Revolution, marks the site of the house where he first saw the light. He graduated from West Point in 1837, and was assigned to the First Artillery, as a second lieutenant, in which capacity he took an active part in the Florida War. In 1841, as a first lieutenant in the First Artillery, he was Adjutant of the United States Military Academy. His next detail was as adjutant of his regiment. These two details bespeak his recognized worth. Hooker was primarily an artilleryman, and always excelled, as a general, in the employment of that arm.

Perhaps few people know of his services in the Mexican War. His record was brilliant. He was brevetted successively for gallantry in action at Monterey, captain; National Bridge, major, and Chapultepec, lieutenant-colonel. Like Grant and others who were to become famous in the next war, Hooker received his practical training in the War with Mexico. He rendered distinguished service upon the staff of Gen. T. L. Hamer, who, but for his untimely death before Monterey, would have been President of the United States instead of Pierce, according to the opinion of General Grant. The War Department records contain the following letters, which I feel are worth quoting here:

HEADQUARTERS 1ST FIELD BRIGADE,
CAMP NEAR MONTEREY, SEPT. 25, 1846.

MAJOR L. THOMAS,
Asst. Adjt. Gen.
1st Div. Volunteers.

SIR:

* * * * *

I am under particular obligations to the Chief of my Staff, Lieut. J. Hooker of the Army, * * * for the assistance (he) afforded me during the whole conflict. * * * By his soldierly conduct and fine military acquirements he has been invaluable to me through the whole campaign; and his coolness and self possession in battle set an example to both officers & men, that exerted a most happy influence.

* * * * *

I am Sir,

Very Respectfully,
Yr. obt. Servt.

TH. L. HAMER,
Brig. Gen., 1 Field Brigade,
of Volunteers.

HEADQUARTERS ARMY OF OCCUPATION,
CAMP NEAR MONTEREY, Octr. 9th, 1846.

THE ADJUTANT GENERAL OF THE ARMY,
Washington, D. C.

SIR:

* * * * *
I beg leave * * * to call attention to the good conduct of * * *
Lt. Hooker, 1st Artillery, serving on the staff of General Hamer.
* * * * *

I am, Sir, Very respectfully,
Your Obdt. Servt.

Z. TAYLOR,
Major General, U. S. A.,
Commanding.

MONTEREY, MEXICO,
Nov. 3d, 1846.

His Excellency,
JAS. K. POLK.

DR. SIR:

There is but one favor I have to ask of the President—growing out of the late battle of Monterey. It is that my *acting* Assistant Adjutant General—I Lieut. Jos. Hooker of the 1st Artillery—shall be made an *actual* Asst. Adj. Genl. with the rank of Captain—to fill the vacancy occasioned by the death of poor Ridgely. I intended to ask you to brevet him—but the vacancy which has just occurred makes a much more appropriate place for him. And I most respectfully urge his nomination to that station.

He has been nearly ten years in the Army—serving nearly the whole time on the frontiers—and doing hard service. * * *

He is undoubtedly one of the most accomplished young officers in the Army. You will see how I have named him in my official report. He will adorn the station to which I ask your Excellency to nominate him. Allow me to say that my heart is in this thing and that his appointment will not only greatly benefit the public service and bestow a just reward upon merit, but it will be a great personal favor to me. Every officer in the Army who knows him will approve the appointment—*unless he wants it himself*.

If you do not recollect to have met Lt. H.—let me add that he is a tall straight fine looking man strictly moral—courteous in his manners—popular with the Volunteers as well as Regulars—and perfectly at home upon every subject connected with the Profession he has chosen—and which he loves to a degree of idolatry seldom found in the Army. I hope he may obtain this appointment—and have the rank and pay belonging to the station he has filled for a long time—to the entire satisfaction of his superiors.

Very Respectfully yr. friend & obdt. servt.,

TH. L. HAMER,
B. G., U. S. A.

Ponder on that last paragraph—"popular with the Volunteers as well as Regulars"—and the Dick Bill over half a century in the future—"the profession he loves to a degree of idolatry seldom found in the Army"—what more could his general say of him? Hooker was more

fortunate in the type of men, under whom he served in Mexico, than he was during the Rebellion. However, he incurred the lasting enmity of General Scott, which fact was to block his way for a time. In the investigation of the quarrel between Scott and Pillow, Hooker's testimony had been fearlessly given in favor of Pillow. After the Mexican War, like Grant and Sherman, he resigned and went into civil life. The life in California appealed to his restive spirit, and here we find him at the outbreak of the Rebellion.

The dramatic manner in which Hooker returned to the service is perhaps best set forth by Gen. H. E. Tremain (one of General Sickles' aides-de-camp at Gettysburg) in his book entitled "Two Days of War." I have found in this book many facts about Hooker, but in this case I will quote verbatim:

"He (Hooker) abandoned agriculture to aid in suppressing the Rebellion, and hastened to Washington when the war broke out. It so happened that his offer of services received little encouragement. He was about to leave the capital unaccepted, and called, before departing, upon President Lincoln.

"It has been said on good authority that he told the President, on being introduced to him, by mistake, as Captain Hooker, that he had been Lieutenant-Colonel Hooker of the Regular Army, and that he had come from California to tender his services to the Government, but that either his relations to General Scott, or some other impediment, stood in the way of making his military education useful.

"I am about to return," he added, 'but before going I was anxious to pay my respects to you, sir, and to express my wish for your personal welfare, and for success in putting down the Rebellion. And, while I am about it, Mr. President, I want to say one thing more, and that is, that I was at the Battle of Bull Run the other day, and it is neither vanity or boasting in me to declare that I am a better general than you, sir, had on that field.'

"Of this interview President Lincoln is said subsequently to have remarked:

"Hooker's eye was steady and clear, his manner not half so confident as his words, and altogether he had the air of a man of sense and intelligence, who would at least try to make his words good. I was impressed with him and, rising out of my chair, I walked up to him, and, putting my hand on his shoulder, said, 'Colonel—not Lieutenant-Colonel—Hooker, stay; I have use for you and a regiment for you to command.'"

I must also quote the picture he draws of Hooker at Williamsburg:

"* * * The handsome Hooker, drenched with rain, dripping and bespattered, sitting impassively in the saddle, almost at the firing-line, lest some event might escape him, and sturdily fixed in the middle of the miry road as though he alone could obstruct it against the enemy's advance. At their approach he told the exhausted gunners at the pieces by his side where and when to fire. It was scarcely possible for a horse to live there; so in the flow of bullets horse and rider soon went down. Besmeared with mud from hat to boot, Hooker still commanded, and with a remount awaited the next onslaught. His last regiment was put in to stay it, and the Rebels wilted back."

The Battle of Williamsburg made Hooker a major-general.

The Century Dictionary defines Hooker as "an American soldier, surnamed, 'Fighting Joe.' Commanded a division of the Army of the Potomac in the Peninsular Campaign; commanded a corps at South Mountain, Antietam and Fredericksburg; the Army of the Potomac, January 26, 1863, defeated by Lee at Chancellorsville, May 2-4 (when at a critical moment he was stunned by a cannon-ball), etc."

Hooker himself never particularly relished his soubriquet of "Fighting Joe," for to him it seemed to savour too much of the *beau sabreur*. The men, however, liked the nickname of their general, and they worshipped the ground he trod on.

Up to the Battle of Chancellorsville, Hooker's star was in the ascendant. Burnside tried to throw on him, and others of his generals, the blame for the Federal reverse at Fredericksburg, but was not successful. In spite of Mr. Lincoln's letter, in which Halleck undoubtedly had his hand, I have been unable to find any proof that Hooker "threw the game" to accomplish Burnside's undoing. In his masterly work entitled "American Campaigns," Major M. F. Steele, Second Cavalry, says:

"Burnside issued an order summarily dismissing Hooker and three other general officers from the service, and relieving Franklin and four others from duty with his army, and took it to Washington for the President's approval, or the acceptance of his own resignation as the alternative. The President chose the alternative, and appointed Hooker in Burnside's place.

"Hooker had gained an enviable newspaper reputation as a dashing corps-commander, and however he may have been regarded by the higher officers, to the rank and file he was 'Fighting Joe.' His appointment revived the morale of the army. He at once instituted some excellent reforms."

Here Hooker's experience as an adjutant-general in the Mexican War stood him in good stead, and the following spring he had an army, which he referred to with justifiable pride as "the finest army on the planet." This reorganization of the Army of the Potomac made Gettysburg possible.

Hooker's preparation for the Battle of Chancellorsville was masterly at first, then everything commenced to go wrong. As usual, Hooker was well up to the front, perhaps too far up for one so valuable. A projectile struck the pillar of a porch under which he was standing and knocked him unconscious. To illustrate the spirit of the man, when he was revived, he made light of his injury and rode along his lines to show his troops that he was all right, but the army had been deprived of its head at a very critical time. This was the second time that Hooker had been injured. At Antietam he had received a very painful wound. By a somewhat singular coincidence Gen. Nelson A. Miles was lying seriously wounded in the same house, in front of which Hooker was

wounded. He remembers the heroic effort that Hooker was making to "stay in the game."

After the reverse of Chancellorsville, Hooker was urged by some to prefer charges against some of his subordinate commanders, but replied, "No, I will not build myself up by carrying other men down." Contrast that with Burnside's treatment of him.

After Chancellorsville, Lee started to invade Pennsylvania, but Hooker maneuvered his army so skilfully that Lee was forced to fight at Gettysburg. Indeed, Hooker once pointed to Gettysburg on the map and said, "There will be the battle." Hooker was the recipient of the thanks of Congress "for the skill, energy and endurance which first covered Washington and Baltimore from the meditated blow of the advancing and powerful army of rebels led by Gen. Robert E. Lee."

At this point, Halleck rises as a cloud to obscure the star of Hooker. When Hooker assumed command of the Army of the Potomac he had been assured by Mr. Lincoln that Halleck should not interfere with him, for he neither liked nor trusted Halleck. At a critical moment Halleck countermanded Hooker's orders to the garrison of Harper's Ferry. Hooker, seeing that he would not be supported by his superiors, requested to be relieved. Thus did Stanton and Halleck accomplish the undoing of a better man than the two of them put together. To illustrate Hooker's attitude on this piece of injustice, history has it that, shortly after his relief, he said to one of his officers:

"Myself and all other generals in the Army had better be sacrificed than that there should be want of harmony and cordial coöperation on the part of all concerned. General Meade is a good officer and a brave man, and will command this Army well."

How many of us could speak as he did under like provocation?

During the Battle of Gettysburg many of Hooker's old troops thought that they were still fighting under him. His spirit was still there. His was not to be the credit for the victory, but without his preparation and leadership would it have been possible?

From Pennsylvania Hooker was ordered to Tennessee, where he commanded the Eleventh and Twelfth Corps. Here he did much to accomplish the relief of Rosecrans. In this country he distinguished himself by winning the famous Battle of Lookout Mountain. Originally his advance was intended only as a demonstration, but Hooker had been studying the topography of that mountain. In this battle even the elements were with him. When the clouds broke away from the summit of the mountain there were Hooker's colors waving in the morning breeze; the army about Chattanooga saw, took heart again, and a mighty cheer arose to Hooker and his men.

In the Atlanta Campaign he commanded the Twentieth Corps in Sherman's army. Halleck and Sherman had some personal correspondence about Hooker. Although Sherman and Halleck subsequently fell out, they were mutually agreed to crush Hooker's chances. In

addition to the foregoing, Hooker had had the temerity to say that Sherman's advance upon Missionary Ridge had been too slowly executed. Hooker was not always wise in expressing his opinions openly, but most of his criticisms have stood the test of time, though they incurred him unnecessary enmity. General Sherman in his "Memoirs" accuses Hooker of a "disposition to 'switch off,' leaving wide gaps in his line so as to be independent, and to make glory on his own account." When Howard was assigned to the command of the Army of the Tennessee, General Tremain says:

"Hooker asked, July 27, 1864, to be relieved from duty, adding, 'Justice and self-respect alike require my removal from an army in which rank and service are ignored.'"

Gen. O. O. Howard had commanded the Eleventh Corps at Chancellorsville. Hooker had never forgiven Howard for the rout of the



BIRTHPLACE OF JOSEPH HOOKER.

Eleventh Corps by "Stonewall" Jackson. Howard had been entrusted the right of the Union lines, and Hooker always asserted that he had warned Howard to watch for just such a surprise. It was the last battle that "Stonewall" Jackson was to fight ere he should "cross the river and rest under the shade of the trees," but he executed a masterly flank movement, which took Howard's corps completely by surprise, and turned the tide of the battle. In justice to Howard, it must be said that he bravely tried to stem the tide of retreating men. In view of these circumstances, it is not to be wondered at, that Hooker took Howard's appointment as a personal affront, particularly as he ranked Howard.

The writer is constrained to the opinion that Halleck was the main stumbling block in Hooker's way. On account of something which

occurred out in California before the war, Hooker and Halleck cordially hated each other. That Sherman had little love for Hooker has been previously referred to. In fact, Sherman must have recognized in Hooker a man who might even secure advancement over himself. All these facts conspired to make it easy for Halleck to balk Hooker's career. We all know how Sherman, after his march to the sea, first took occasion to disregard Halleck's orders and then to insult him, and how, when he got to Washington and the great review was in progress, he rejected Mr. Stanton's proffered hand and turned his back on him. Grant's opinion of these men is a matter of history. Major Steele says of this pair of Mr. Lincoln's advisers:

"Truly, the military service of the United States had its drawbacks under Mr. Stanton and General Halleck. Those two men sent many a loyal and able soldier to his grave with a heart crushed under the burden of their injustice."

Incidentally permit me to say that in that comprehensive and un-biased work, "American Campaigns," Major Steele deals with the events of Hooker's career in as unprejudiced and fair a manner as it has been my good fortune to encounter among the works of history. Hooker was human, and no one claims perfection for him, only justice.

Hooker fought Williamsburg alone, with 30,000 Union troops within musket-shot, who were not sent to reinforce him, and then to be accused of lack of coöperation by Burnside and Sherman! To use Hooker's own words when the subject of Williamsburg was brought up, "Boys, never mind. Never mind. Don't worry about that sort of thing. History will set us all right."

During the war Hooker had been made a brigadier-general of Regulars, which rank he retained in the reorganization of the Army in 1866. He was married in 1865 to Miss Olivia Groesbeck of Cincinnati. In 1867 he suffered a stroke of paralysis as a result of his injury at Chancellorsville. His wife died in 1868, and he was retired as a major-general in 1868. He lived until 1879, when, on October 31, he died at Garden City, Long Island. He lies buried by the side of his wife in Laurel Grove Cemetery, Cincinnati, Ohio.

In the preceding pages I have endeavored to give a few of the more salient features in the unusual career of General Hooker. If, by the fruits of considerable reading on the subject, I have been able to shed a little different light upon the character and deeds of the "American soldier, surnamed 'Fighting Joe,'" I am glad. If some of the younger and rising generation may have had their impressions changed, I am more than repaid. Back in the old Bay State we have the Hooker Association of Massachusetts, over six hundred strong. One hundred and fifty of these served in the old Second Division of the Third Army Corps, some knew the General personally, and some of us are of the generation which may yet see an even greater crisis than did our fathers.

On the east side of Boston Common, facing on Beacon Street, stands a monument. Col. Robert Gould Shaw, whose mother was proud that they "buried him with his niggers" at Fort Wagner, presses on through all eternity at the head of his men, graved by the hand of a master. On the other side of the street, below the golden dome of the State House, Maj.-Gen. Joseph Hooker, sitting his horse with the same ease and grace which characterized him in life, looks out over the Common as if surveying a battle-field and determining the position of his troops. Behind him we can almost see the armies he once led, and fluttering from its lance, the white diamond of the division he loved and whose survivors still worship him. Below him, drilling on the Common, are the Boston schoolboys, the living exponents of the spirit of the Puritans, which may yet, but, please God, never again, be called upon to save this our country.

Like Massachusetts herself, Hooker needs "no encomium." There he stands.





"Education and the National Defense."

President John H. Finley, Coll. City of New York.

This is the last day of grace and yet I have found no time to give thorough study to your plan of military instruction in colleges and universities. I do not know whether it is practicable and feasible, but I do know out of my own experience both as a student in a college in the West where military instruction was given as a part of the regular curriculum leading to the bachelor's degree and later as president of that same college, that such training can be consistently given with that which is called purely academic, even though the adjustment is sometimes difficult. I know, too, that many of the young men who had this instruction in military tactics were among the first to volunteer their services when it was thought that there would be need. To me the ideal scheme of education is that which contemplates the preparation of young men in our colleges for the highest social service. The only question is as to the relative values of various kinds of service. So long as we need soldiers and when we need them the service must be considered of the first.

NEW YORK CITY,

June 14, 1910.

Captain H. A. Moon, Alabama National Guard.

At the joint camp of instruction and maneuvers held recently at Chickamauga Park, Ga., I had the pleasure of reading one of the prize essays on "Education and National Defense." * * *

Such productions as the essay by Lieutenant Mayes should be read by every educator, business man and all patriotic citizens of our country. Embodied in this essay is one of the reasonable, practical and possible solutions of the problems of putting our country in a reasonably fair state of military preparation. * * *

BIRMINGHAM, ALA.,

August 6, 1910.



ORIENTAL WAR CLOUDS.

(New York Herald.)

DISCUSSION of Great Britain's naval policy is a thing that, to the American who hears the endless rounds of contesting argument, bids fair to "run on forever." Another English naval expert has discovered shadows in the Pacific cast by war clouds formed because of the relations between the United States and Japan, especially because of the American "open-door" policy.

This latest contribution has appeared in the *Daily Graphic*, forming part of a series of articles which, under the general title of "The Sovereignty of the Seas," have been embittering still further the "naval policy" wrangle. The author of this series is Mr. Gerard Fiennes, numbered among England's foremost naval experts and a man who is not particularly well liked at the Admiralty because he insists on "speaking out in public."

Mr. Fiennes states that the Anglo-Japanese alliance cannot be renewed on its expiration in 1915, and that there are grave indications that this agreement may not conserve Far Eastern affairs on peace lines even before its existence is concluded. He argues, too, that Great Britain must give up its policy of regarding the Empire in the light of the "hen-and-chickens" combination.

"Japan will," he asserts, "in the last analysis, fight the United States very much for the reason that prompted Bismarck to fight France."

He admits that if Japan to-day ordered Germany out of Kiao-chau the Kaiser would have no alternative but to move out, adding, however, that in such an event the old European league would revive and Germany, France and Russia would overwhelm the Mikado's people.

"But," contends this naval expert, "Europe is not going to lift a finger, I imagine, when war breaks out between Japan and the United States, to save the latter the islands of which they deprived Spain. Europe has a 'Monroe Doctrine' of its own; and it includes the determination to leave the United States to stew in their own juice."

* * * * *

"To regard the United States as entirely a Pacific power, or Canada as exclusively vulnerable on the Pacific coast, is, of course, a *façon de parler*, but it is in accordance with reality. Our future difficulties spring not so much from strategical causes as from the fact that there is arising a Pacific politics, remote from and independent of the politics of Europe.

"The situation may be quite briefly defined, though I do not pretend that the definition exhausts all the elements. The white nations demand the open door in the realms of the yellow man, while claiming the right to close their own door to him. Japan will accept either alternative, but not both at once. For the present the United States stand for the embodiment of the white man's position.

"Great Britain, bound by the ties of an alliance for the next few years and remote from the dangers which bulk so big in the eyes of Americans, Canadians and Australians, is out of sympathy with, or is at least lukewarm over, the policy of exclusion which her own children in the Pacific consider vital to their national safety and economical development.

"Therefore there exists a certain community of ideas between the oversea nations of the Empire and the United States which may easily become perilous to the unity of the Empire. In our enthusiasm for common defense we must never forget that common defense postulates common aims and common policy.

"The Japanese alliance expires in 1915; it cannot be renewed. If renewal was possible before, it became impossible when the American fleet visited Australia in 1908 and suggested to the people of the commonwealth that Codlin is the friend, not Short. If no conflict arise between now and then to make the name of the Pacific Ocean an irony the British navy, reinforced by, let us hope, a goodly number of 'fleet units,' contributed not only by Australia and Zealand, but also by Canada, South Africa and India, will once more earn for itself the blessing bestowed on the peacemakers. The Pacific fleet will live up to its name. It will be expensive, but it will be well worth while.

* * * * *

"A large assumption has been made above, namely, that the peace of the Pacific will be preserved till 1915, and the status quo maintained. There are grave indications that this may not be the case. I cannot advance arguments to prove it by chapter and verse, but there are a hundred indications which show that a collision between Japan and the United States is approaching. The Americans live in a fool's paradise in this matter.

"They appear to think that the Japanese are, and must eternally be, grateful to Commodore Perry for having opened their oyster, willy nilly. The Japanese are only grateful in so far as contact with the West has armed their hands against Western greed and aggression. Their main desire is to use the power thus acquired to cry 'Hands off!' to the white man.

"The insistence by the Americans on their right to trade on equal terms with the Japanese in Manchuria and Corea; the treatment of the subjects of the latter power on the Pacific slope—either of these causes of disagreement will provide Japan with a *casus belli* at the desired moment, and one which will, in all probability, put her in the right in the eyes of the world. The Japanese know how to apply the art of jiu-jitsu to international politics.

"More dangerous still, the Japanese are full of contempt for American brag and bounce—for the lack of national spirit, or even of true

nationalty, which they discern in the Americans. They have a profound disbelief in the war worthiness of the American Navy, and an acute realization of the fact that the strategical situation is overwhelmingly in their favor. It is objected that the Japanese are too poor to fight. When will people recognize the fact which all history teaches—that it is the poor nations, not those who have grown rich and comfortable, which fight? The Prussia of Frederick the Great, the France of Napoleon, were poor.

"It ought to be so obvious as not to need saying that it is the nation which hopes to gain something, not the nation which is preoccupied in holding what it has gained, which is tempted to war. Japan is rich enough to afford war because, directly or indirectly, she will make war pay for itself.

"It is, furthermore, a profound mistake to suppose that the Japanese look upon war in the same light that we do, or profess to do, when the result may be doubtful and the material gain not great. They do lip service to the aspiration after peace, but in their hearts they regard war as cleansing, antiseptic—much as Ruskin regarded it. Not only in its results, but in itself, war is to them, or at any rate to the classes who hold the reins of power, a blessing rather than a curse.

"In a land where the proudest ambition of every man is to die for his Emperor, where every mother ardently desires that glorious fate for her son, there is no thought of stricken homes to turn the wavering scale in favor of peace. The difference between America and Japan is the difference between Hobson and Hirose. The former returned in safety—thanks to the chivalry of Cervera, to which he did not hesitate to appeal—and was kissed by every girl in New York who could get at him.

"Japan will, in the last analysis, fight the United States very much for the reason that prompted Bismarck to fight France. The war, that is to say, will be a war of consolidation—the consolidation of the Yellow Peoples. The Chinese despise force, but easily yield to the fear of it. Japan has beaten the most aggressive of the white powers already; victorious over another, she will appear to her huge neighbor the invincible, the adversary to be agreed with whilst in the way with him. The United States offers at once the most practicable and the surest prey.

"In the first place, the United States is not quite Europe. I suppose if Japan were to order Germany out of Kiao-chau to-morrow Germany would have no choice, so far as her power of fighting Japan is concerned, but to go. But the fiery cross would fly through Europe, and the old league which nullified the Treaty of Shimonoseki would revive. With the German and French navies using French coaling stations, with Russian armies in Manchuria, Japan would be overwhelmed.

"But Europe is not going to lift a finger, I imagine, when war breaks out between Japan and the United States, to save to the latter the islands of which it deprived Spain. Europe has a 'Monroe Doctrine' of its own; and it includes the determination to leave the United States to stew in its own juice."

THE MARCHING AND TRANSPORT OF THE SPANIARDS IN MOROCCO.

BY A BRITISH OFFICER IN "ARMY AND NAVY GAZETTE."

BEFORE speaking about the Spanish soldier as a marching machine, I want to say a few words as to his excellent spirit throughout this campaign. That he does not like his military service is well known, and he has every reason to be dissatisfied. He is not well fed, his pay only amounts to 1½d. in peace and 2d. a day in war time, and he feels that in this war he is not fighting really for his country but for the mines.

In spite of all this, however, he is cheery right through, and he does his work well, while in a fight, so long as he has his officers with him, he is plucky; when they are *hors de combat*, he is prone to panic, due, I fancy, largely to the lack of discipline, and not to any want of personal courage. His powers of endurance without food and water are nothing short of extraordinary, owing in a great measure to the custom of expecting men to fight or march without a meal which seems to exist throughout the army.

I remember an instance of this of which I was one of the unfortunate victims. The day of the battle on September 30th we had a little weak coffee in the early morning, and from then till 8.30 in the evening were without food or water, and fighting most of the time. It is worthy of note that our company transport with water was with us all day, and that after we got back to camp the casks were emptied as not being required.

In spite of the lack of care for the soldiers' needs he does not grumble; and all the men were singing as we marched back to Zeluan that night. With regard to his marching, I do not think it could be beaten. I have seen Sikhs and Gurkhas, as well as our own soldiers in India, and the Spaniard compares very favorably with all of them. He carries in addition to his rifle 150 rounds of ammunition, his cooking utensils and water-bottle, also a cup; while a big knapsack and a rolled blanket complete his equipment; the knapsack is as heavy or as light as he cares to make it, but averages eight pounds or ten pounds. I cannot quote the total weight, but should imagine it not short of sixty pounds.

With the majority of soldiers, the sandals (*apargettas*) which are issued are more popular than the boots, one reason being that there is no issue of socks, and marching in badly made boots without socks is impossible for any length of time, while the sandal is better without socks.

I, personally, am not able to walk far in them, but imagine that is merely a matter of practice and use; there is no rule laid down, and the men march in whichever they like.

March discipline hardly exists, each man marching next the man he wants to talk to, and no permission is asked to fall out. This system—which would ill suit our army—is successful here; it suits the Spanish nature, which does not stand strict discipline well, and there is no falling out from laziness, each man, however tired he may be, getting there somehow.

The country is without roads, and the surface covered with loose stones and thorn bushes, so that progress is none too easy; while the climate, with its hot African sun, forms another bar to good march-

ing. On the whole, in this campaign there has been little regular marching, owing to the smallness of the theater of war, but what there has been was very arduous. A very good example of what is done in the way of distance was a march of my own regiment in September. We started from Tres Forcas, without having done any marching for ten days, at four in the afternoon, arrived at Melilla at eight, having covered 17 kilometers; there we slept, and starting at four the next morning, marched to Zeluan, 32 kilometers, arriving there in the afternoon, a total distance of 49 kilometers, without a single man being reported missing. There certainly were a few men who fell out, but who were not more than half an hour late coming into camp. When it is recollected that during the whole campaign there has been no march exceeding twenty-four hours, it speaks well for the capacity of the men.

The transport of the army deserves notice. Without exaggeration the Spanish mules may be described as the best in the world, and the way they have stood the rigor of this campaign with comparatively slight casualties has been little short of marvellous. The transport of the Spanish Army is practically confined to mules, there being only motor transport for the artillery ammunition, and a camel transport specially organized for the occasion, about which I shall speak later. The transport may be divided into two classes—carts drawn by mules and pack mules. The country here being unsuitable for wheeled transport, the lack of carts is not felt. The medical corps have covered wagons drawn by six mules. They are well organized, and being of sound construction, answer the purpose of transportation of casualties and sick well. The mules are driven by three drivers, mounted postillion fashion as in our artillery. The only other wagons that exist are one per battalion, which is used more as a general service cart for removing refuse, etc., than for field transport.

We now come to mule pack transport, which may be considered under the three arms. The artillery, with the exception of mountain batteries which exclusively use mules for guns, ammunition and general transport have eight mules per battery simply as general transport animals for water, food and officers, their ammunition being transported by motor as before mentioned. The cavalry have as regimental transport twenty-four mules per regiment divided among the squadrons and a further six mules for regimental transport, officers' baggage (of officers not with any particular squadron), and reserve ammunition. Infantry have sixty mules per battalion, divided as follows: Six mules with each of the four companies. These are divided as follows: Three with ammunition (9000 rounds), one with water in four wooden casks, one with entrenching tools, and when necessary, one day's rations, and the remaining one for the company officers. Everything else is carried by the soldier. The company, therefore, is a self-supporting unit, and capable of being detached at a moment's notice for twenty-four hours and longer if more rations and water are forthcoming. The remaining twenty-six mules are divided as follows: Sixteen with reserve ammunition of 24,000 rounds, three for the commanding officer and such officers as are not attached to companies, and four with the doctor and his staff, the remaining three are used for reserve rations. There is no second line transport as in our army, the company and regimental transport marching with the battalion, and when a company is detached, it takes its own transport, the remainder being in some central position, usually where the commanding officer is.

All food supplies are arranged for by the military supply depart-

ment, which, besides having mules of their own, requisition for convoys mules from the regiments in the station from which the convoy starts. In addition, for this campaign a Frenchman from Casa Blanca has hired 200 camels with Moors to look after them for transportation of forage, and on the whole they have been satisfactory, though during the first rains some fifteen or twenty died from exposure. They are not attached to any particular corps, and are commanded by two or three French and Spanish civilians, who take them over from the supply department.

The motor transport for ammunition of the artillery is excellent, and both the engines and the wagons themselves have stood the test of four months over a rough and rocks country without roads surprisingly well; and I think with advantage the motor transport might be increased and be used for the regimental (not company) transport of infantry and for all the transport of cavalry. The system is exceedingly well organized and works easily.

THE EMPLOYMENT OF RUSSIAN ARTILLERY IN MANCHURIA.*

BY LIEUT.-GENERAL H. ROHNE, RETIRED.

THE accounts rendered of the Russo-Japanese War have been widely read with the greatest of interest, and above all in Germany, and the artillery has not been the last to deduce from these accounts the precepts to be found therein. But on many points there is a great divergence of opinion, and this is above all true in those matters which concern the choice of positions. A lively discussion has arisen between partisans of masked fire and unmasked fire. The Russian artillery, which in the first conflicts had shown absolute disdain for shelter and protection of every nature, and which had submitted to terrible losses in the unmasked positions occupied on the crest of high places, where the Japanese shrapnel easily reached them, preferred, subsequently, the masked positions. These are undeniable facts. But the important thing is to know what results were obtained. According to the reports of certain Russian officers, the results obtained were simply extraordinary. But it is not so easily understood how, despite these reports, the Japanese artillery succeeded in maintaining itself efficiently and in rendering efficient support to its infantry. It is still less easily understood when we are informed that this artillery was not provided with gun shields, as is the case with modern guns. On a closer examination serious doubts arise as to whether or not matters really occurred as depicted in the given reports. Subsequently the fire of Russian batteries, posted under cover, often hundreds of meters in rear of the mask which protected them, was directed by their chiefs often posted at more than a kilometer on the flank, and utilizing in a unique manner the telephone and visual signalling, or verbal transmission of orders by means of a chain of men. The direction was obtained by the aid of the compass and the inclination by use of a quadrant. The adjustment required but a few shots, it is said, and the effect was decisive.

In itself, the masked fire presents no difficulty from the moment that aiming by means of an auxiliary object has become the rule. Such is

*Translated by Lieut. E. Santschi, Jr., 15th Infantry, from "International Revue."

the case in the French artillery. This method was known to the Russians, but was only used in exceptional cases; the compass, telephone and various other modern appliances were totally unknown to the men at the beginning of the war. The personnel appear to have made the acquaintance of these appliances either in the theatre of war or en route thereto. There is also a great percentage of illiteracy among the Russian soldiery, and all these combined circumstances tend to show that masked or indirect fire, especially the aiming, the use of the telephone and other means of transmitting information, presented great difficulties. The proper direction of battery fire is extremely difficult when one is not in close proximity to the battery. This is due not only to the increased difficulty of transmitting orders but also because the observation of the point of fall becomes more difficult as the observer moves to the flank. Yet, in none of the Russian accounts so far published by their officers are any of these difficulties mentioned. On the contrary, according to the Russian accounts, everything passed off without the least friction and the results were always brilliant.

It is not surprising, therefore, that after the Manchurian War, the use of masked fire became the general rule in Russia. In Germany, also, many authors, subscribing blindly to the accuracy of the Russian accounts, extol masked fire as the sovereign remedy for all the evils from which the artillery suffers. It is often forgotten on advancing such a solution that all steps taken in a war are not worthy of imitation but that only those measures should be imitated which guarantee success. As long as there exist no official Japanese reports by the aid of which these optimistic Russian versions may be criticized, it will be wise to regard these latter with some skepticism. A few examples will suffice to show how the Russian reports are neither accurate nor reliable, how much their versions are deduced in a subjective manner, and how little worthy they are of confidence. These examples are taken from a book of recent appearance* and which is no more than a translation of a series of articles, published in 1905 and 1906, in the *Journal of Russian Artillery* by the Russian Colonel Bjelajew. In the introduction, which gives a cursory view of the two predominating ideas in the Russian artillery, the author declares himself a great admirer of General Langlois. The doctrines of Langlois, declares Bjelajew, were taught in the Russian establishments of instruction even before the war, but the regulations, as well as the exercises of artillery, were still handicapped by ancient ideas. But during the course of the war the theories of General Langlois are happily remembered—theories which received such a brilliant consecration in the course of the Russian operations in Manchuria, if we are to believe the Russian colonel.

I do not know what effect such praise will have on General Langlois, nor what position he will take in reference thereto. I desire, however, to remark that the Russian artillery has by no means the right to claim that it has applied the ideas of General Langlois. On each page of his excellent book, so well known and entitled "Field Artillery in Connection with the Other Arms," he recalls the fact that the unique function of artillery consists in supporting the infantry. Never, perhaps, has this function been so little observed as it was by the Russian artillery in Manchuria. Even the Prussian artillery performed its task better in 1866 on the battle-fields of Bohemia. If here, also, the infantry often remained without support from the artillery, it was due to the fact

*Questions of artillery tactics, from the experiences of the Russo-Japanese War, by Colonel Bjelajew. Paris, 1908. Chapelet and Company.

that the former had no need of the latter, because owing to the superiority of armament and manner of combat it was sufficient of itself to overcome the enemy's infantry. It was by no manner of means the same with the Russian infantry, because it had great need of the co-operation of the sister arm. To be exact, Langlois recommends masked artillery positions, but with this reservation, very important, that the battery commander must not, in order to observe the point of fall, remove himself such a distance from his battery that he must abandon the direction of its fire to another, and with the other reservation, that in masked fire measures must be taken to abolish the inevitable dead space. Now these two points, so vital, have been completely lost from view by the Russian artillery.

In the discussions brought forward since the Manchurian War there have appeared, from time to time, in the military press articles setting forth the plea that this war demonstrated the superiority of German ideas over those of the French, since the Japanese followed the former and the Russians the latter. I think it but just insofar as the artillery is concerned to note that this affirmation is only partly true. I have already set forth how much the Russian methods differ from the French theories, especially in those matters dealing with the principles, because we must not be misled by dangerous illusions. And again, the Japanese without knowing it perhaps, made use of decoy batteries, at that time absolutely unknown in Germany and which the French regulations recommend (paragraph 629), without calling it by that precise name. There exists yet another fundamental difference between the principles extolled by the French regulations and those followed by the Russian artillery. Practically every page of the regulations in question preaches the offensive—the defensive being discussed with seven lines—while on the part of the Russians the war, and consequently also the employment of the artillery was of a defensive nature; they confine themselves to an effort to maintain themselves in previously arranged positions.

Let us look a little closer at some of the examples cited by Bjelajew. The first battle on which he comments is that of Tinrentcheu, better known, especially in Germany, as the Battle of the Yalu. The Russian author gives an account of the artillery action based on private letters to which he attaches some observations. The effective Russian artillery in this action is given by him as 46 pieces and the Japanese are credited with 254 pieces. In reality they were respectively 40 and 132 pieces.

The account of the Battle of Wa-Feng-Kau is based on the letters of a young Russian officer, whose battery was subjected for five hours to the fire of sixty Japanese guns, as well as twelve howitzers. "Our position was riddled with projectiles. I estimate their number at least at 3000." Consider a moment, 3000 projectiles in five hours! That makes one projectile every six seconds. The author adds the remark that the battery was well protected by cover (cover sufficient for horsemen) by his emplacement on the counter scarp and that it was thus sheltered from heavy losses. Yet in speaking of another battle, Bjelajew states that the Russians made no endeavor to secure cover until after the experiences of the Yalu and Wa-Feng-Kau. And it seems that in this particular he is correct.

The Battle of Datchschao, July 24, 1904, marks the change in Russian artillery tactics. It appears that here resulted the first substantial success of the Russians with protected fire. But already, in June, 1904, Lieutenant-Colonel Patchenko writes that the precepts gathered at Wa-Feng-Kau prove the necessity of installing batteries under cover. Up

to this time, not one of our battery commanders has seen the Japanese batteries, nor have they been able most of the time to ascertain from which direction they were firing. The Japanese did not measure the distance, but confined themselves to estimating it by aid of the range-finder or by means of a map. They employed observers on the flank, and the service of visual signaling with signal flags assured them complete liberty of action on the field of battle. How, we ask, was this Russian officer, on the field of battle, able to have such exact knowledge of Japanese methods? How at such distances, 4000 to 5000 meters, was he able to determine the Japanese methods and see the organization of their system of communication, when from his own avowal he was unable to reconnoiter the Japanese position? Lieutenant-Colonel Patchenko has not given us here his observations, but what he has deduced supposedly from personal impressions, these deductions have no scientific value and should not be considered a source from which military history can draw authentic information.

In an article published by Patchenko in a review edited by a staff officer of General Kuropatkin, it is said that until that moment (that is to say, until the Battle of Datchichao), "the positions for the artillery were chosen some time in advance and parapets were constructed for the artillery. Naturally these positions were known to the Chinese, and consequently to the Japanese. After the Battle of Datchichao artillery positions were still chosen in advance, but the parapets were not constructed until a few moments before the arrival of the pieces. Patchenko declares, moreover, that the prescribed intervals of thirty paces, despite the fact that regulations prescribed intervals of but twelve paces. "For the reason," he says, "that I had ascertained by exact measurements that with the Japanese these intervals were not less. And I concluded that the Japanese knew quite accurately the size of the cone of dispersion of Russian shrapnel." Unfortunately, the Russian author neglects to enlighten us on the manner in which he proceeded to enlighten himself on the distances used by the Japanese batteries under cover.

Two of Patchenko's batteries, against which the enemy fired with special fervor, were 500 meters in rear of the crest of a hill commanding the position of their pieces by at least twenty-five paces. The minimum distance at which the Russian pieces could fire was 3300 meters. The enemy could see nothing of the batteries and the orders of the battery commanders were transmitted to the units by a chain of soldiers. "The entire terrain before us," he declares in a letter, "was represented on a perspective sketch, where the various directions of fire were designated by numbers. Whenever an objective appeared, it was sufficient by means of a prearranged signal to indicate the battery to fire, as well as the number of the target. The battery commanders had determined in advance the azimuth for each direction of fire."

The position here chosen would not be considered advantageous above all in the defense of a sector, because it locked a field of fire at the most effective ranges. The preparations made for fire were excellent, but measures of this sort can only be taken in a battle of position and not in a running fight. On the heights covering these positions there were allowed to remain twelve parapets, which had been apparently constructed in another engagement. It appears that these works drew upon themselves the fire of a dozen Japanese batteries. Despite the fact that the Japanese employed fire in echelon, their longest shots fell 300 meters short of the Russian batteries.

Commenting on this, Colonel Bjelajew states in a Russian periodical that a Japanese staff officer undertook a daring raid for the purpose

of reconnoitering the position of the Russian batteries, but that he was taken a prisoner during the enterprise. When questioned as to his reason for undertaking this task he replied, "Your battery annoyed us very much, and we were unable to ascertain where it was established."

The French translator adds, that in no official report has he been able to find the least mention of this audacious reconnaissance.

Another episode of this battle reported by Lieutenant Potiekhir deserves notice. During the second day of the engagement the battery found itself in a protected position without being able to see anything of the enemy and fired at a range exceeding 6000 meters. In the evening at 8:30 the battery commander announced to his unit that it had dismounted two Japanese pieces and one Japanese caisson, and that during the whole day it had, by its fire, silenced the enemy's batteries. That a battery commander should give such information to his unit on the night of a battle is easily understood; but to be asked to believe that at 6000 meters he could see such results is another matter.

In the Battle of Liaoyang Colonel Slyssarienko employed indirect fire from a protected position to a large extent. His action, as told by himself in a private letter, confirmed the partisans of protected positions in their ideas, and I think it wise to examine the Russian colonel's account a little more closely. During the night of August 29-30 he arrived with his batteries at the bivouac close to the village of Systchanyou, and he received the order at midnight to occupy, before dawn, a position from which he could support the artillery of the third army corps and engage the troops in front of this corps. By the light of a lantern Slyssarienko studied the map and became convinced that the Japanese batteries would be found on three designated heights or in rear of them. Judging from the experiences of the past few days, he estimated the angle of site of the Japanese emplacement at 3 degrees. By the aid of a hand compass, and thanks to the light of the moon, he measured the length of the mountain where he himself wished to take position. At 3:00 A.M. he set out with the necessary personnel for exploration for the purpose of reconnoitering the position chosen on the map and the roads leading thereto. At 5:30 the batteries were in position ready to open fire and had already constructed trenches to protect the personnel. The two batteries then determined the least angle at which they could fire at the covered positions in their front, and the remarkable part of it all is that in front of one there was a dead space, 2950 meters, and in front of the other an analogous space of 2500 meters.

When at break of day the Japanese opened a violent artillery fire against a battery of the third corps, Slyssarienko, provided with compass and signal outfit, ascended a difficult height to observe therefrom. From this point he discovered clearly the heights crowned with Japanese guns, the guns were being rapidly fired and some of them were visible to the naked eye. The Russian colonel oriented his compass toward the first Japanese battery, measured the angle it formed with his batteries and sent word to the latter to aim by aid of the compass (angular division 205). The second battery was to open fire by platoon. At the end of 10 or 20 minutes the fire was opened and the ranges ascertained without difficulty, according to Slyssarienko. The second battery obtained firing data from the first and thus in 20 minutes the Japanese fire was silenced. The first battery continued firing at this objective, but the fire of the second by means of signals was directed on another Japanese battery of twelve pieces stationed more to the left. In a

few minutes that battery also was reduced to silence and the artillery of the third corps was able to again take up the fight. I shall not examine the further action of these two batteries; what I have just related is the most remarkable part of the rôle which they there played.

The methods employed by Slyssarienko have been praised without measure. It is possible that the Japanese batteries ceased their fire and that the battery of the third Russian corps was able to resume the action. But the above method does not constitute a model, and I would not counsel its imitation. It would be very instructive to ascertain what part of the success obtained was due to merit and what to chance.

That the reconnaissance of the position should be preceded by a study of the map was excellent, but their reconnaissance itself was defective. The position was not chosen with a view to the effect to be obtained, but because of the protection it offered. The first condition to be fulfilled in order to have effective fire is that the objective be visible, not necessarily from the battery itself, but from a point in close proximity thereto. But here the objective was not visible either from the battery or from a point in proximity to the battery—that is to say, on the crest forming the mask. There was no convenient emplacement for observation. The battery commander did not seek such a place until after the enemy opened fire, and finally found it on an elevation difficult of access. It was a happy hazard, because in ascending this height the Russian colonel, as he himself writes, was removed from all doubts as to whether or not he saw the Japanese batteries. In the first place the reconnoitering officer should seek a point of observation and only after that should the battery position be chosen; this position determines itself once the point of observation is chosen. Precious time was wasted before the guns were able to open fire and disengage the guns of the third corps. The point of observation was about 800 meters to the front and flank of the batteries and on a height of difficult access. (To make the ascent the Russian colonel had to scale the rocks.) After having made observations with the azimuth, it was necessary to send by courier to the battery the necessary orders to open fire, etc., and it can also be seen that the Japanese were able without any trouble to direct their fire for at least a half hour on the battery of the third army corps. They must have fired very poorly, because in spite of their great numerical superiority they were not able during this time to silence the Russian fire. Under the conditions would it not have been more logical to be content with less effective cover in order to sooner open fire? I shall devote no more time to the development of the firing. What strikes me most is the few shots necessary to silence the fire—one correction in direction and two in elevation—and apparently it was not necessary to regulate the height of explosion, even though it was not possible to measure the angle of site. What also surprises me is that one change of direction was sufficient to carry the fire about 1000 meters to the flank—that is to say, from the first objective to the second. Nor, to my mind, is it rational that the groups commanders should see the objective while the battery commander should not see it at all. In reality it is equivalent to the former commanding a large battery of sixteen pieces. In such a manner it would be impossible to use the full destructive power of a battery to the best advantage.

Unfortunately, the official reports of the Battle of Liaoyang have not yet been published, according to the account rendered by a German officer, who was in close proximity to the artillery of the guard, which was bombarded by the Russians (he treats of the artillery against which

the Russians directed their fire in the second instance—that is, the artillery on the left), the effect of the batteries of Slyssarienko was very feeble. “The Japanese batteries of the central and left groups fired nothing against them (that is to say, against the Russian batteries firing from cover) the 30th and 31st of August, as far as I was able to ascertain. The height of burst of the Russian shrapnel was very irregular, most often too great, and this further diminished the effect of the Russian fire already very feeble.”

But against the batteries of the Japanese left wing—that is to say, those batteries which the Russians bombarded at the beginning, the effect was by no means very great, or else these batteries, which supposedly had been reduced to silence on the 30th of August, would have been able to open fire only with much difficulty from their old positions on the morning of the 31st.

If consequently the effect obtained against the batteries without shields was not very transcendent (the 31st of August, the batteries of the guard were not even hindered by Slyssarienko from directing their fire against the Russian infantry), we must admit that against batteries with shields their effect would really not be worthy of notice.

In passing, it might be remarked that these two batteries (the first and second batteries of the ninth brigade of artillery) fired together 5904 shots on the 30th of August.

In the Battle of Shaho the same situation is found. During the night of October 11-12 Slyssarienko received orders to put himself in position upon Dwongo Hill to the right of a battery of the forty-third brigade. As he himself remarks, he searched from 9:00 P.M. until midnight with his reconnaissance party near the village of Takon for a depression in which to place his batteries in position. Can the concern for cover be carried to any greater extent and can less interest be shown in the effect to be obtained? There is not even a question as to the objective of a battle, the sole consideration is protection. And as the Japanese took possession of the hill in question by a night attack, the position so assiduously sought was not occupied. Another was chosen, 3 or 4 kilometers in rear, and it also was protected. Here, again, the group commander is alone in seeing the objective, and by the aid of signals and the telephone directs the fire of the batteries down to the minor details.

[TO BE CONTINUED.]

THE EDUCATION OF THE CHINESE CORPS OF OFFICERS.*

TRANSLATED FROM THE GERMAN BY LIEUTENANT G. V. STRONG, SIXTH
U. S. CAVALRY

THE movement started in the year 1906 as regards the increase and education of the corps of officers has been kept up.

Already there are schools in each province, and in addition middle schools are being built in Peking, Kanking, Wutschang and Sinan-fu. When these are finished the graduates are to at once enter the Imperial School in Peking. As some time must elapse before the newly trained officers are available, the officers for the newly formed troops have been taken from the provincial schools after having completed a special course of instruction.

The education of these young officers is not finished at the completion of this special course, as the government has lately opened another

imperial school at Paoting-fu with the decision that for the present all officers coming from the Provincial Schools Special Course must go through a supplementary course. Not until the above-mentioned middle schools are in full swing is the course in Paoting-fu to be stopped or at least altered.

The officers of every mixed brigade and division must periodically go through a course of study at the division staff, so as to complete their training. These courses are, however, soon to be replaced by a large Imperial Normal School in which the officers from all provinces are to be instructed and where they can receive practical and theoretical instruction; also a detachment consisting of troops of all arms is to be stationed at the school.

The intention of establishing a military academy could not be carried out until now; also the various schools for intendants, medical and veterinary corps, etc., that have been planned, have not yet been opened. So far there are only schools as follows:

1. One school for the military officials of the Ministry of War.
2. One intendants school.
3. Three small veterinary schools.
4. Three small schools of musketry.
5. One telegraph school.
6. Ten topographic schools.

The schools for civilian doctors in Tientsin and Teheten supply some military doctors.

The military schools in their present arrangement are almost all well attended; this is especially so since the opening of the Nobels Cadet School, to which the sons of the members of the imperial family and the highest Manschu and Chinese families are admitted. To this school is added a military course of instruction for princes and nobles of the imperial court.

The aggregate of the students attending the different military schools for officers, and men holding rank as such, is at present 7000. In the schools for noncommissioned officers there are 25,000 in attendance.

The corps of instructors in the newly-opened schools consist mostly of Chinese, only a comparatively small number of foreigners are employed: twenty Japanese and five Germans.

The Chinese teachers get their education either at the Military Academy in Tokyo or in the schools in Tientsin, Paoting-fu, Wuschang and Nanking.

In Japan there were on January 1, 1909, still 700 young men for primary military training. As this number is very large the minister of war has decided that from now on only fifty candidates for commission shall be sent to Japan yearly. Fifteen older candidates are to go to France every year, stay for five years, and after their return they will be added to the personnel of teachers. So far there are already two small groups of these young people there who are going through a preparatory course in La Flèche in order to perfect themselves in the French language before they take station with troops or enter the school of arms for officers (*Waffenschulen*).

The Germans also have shown themselves willing to be useful to the Chinese Army. Two years ago ten Chinese officers were attached to different German organizations for military training.

There is no doubt that to-day the number of trained officers is being greatly increased, and that the system of military instruction is favorably developing, and with the ambition and aptitude shown by

these young officers in theoretical and practical work there can be no doubt that they will be successful.

Progress, compared with the earlier days is shown by the fact that these trained officers attain high rank at a comparatively early age, as most of the brigade commanders and division staff officers are still young men.

The personnel of the N. C. O.'s is not as good as that of the above-mentioned officers—though better than formerly. The N. C. O.'s are particularly lacking in initiative, most of them being useful for parade, drill and setting up drill only.

IDEAS CONCERNING THE EMPLOYMENT OF RAILROADS IN WAR.*

TRANSLATED BY SECOND LIEUTENANT EMILE V. CUTRER,
ELEVENTH INFANTRY.

1. When one nation makes war against another it is necessary, in order to undertake it, to prepare the greatest number of soldiers that may be possible.

2. In time of peace, on the contrary, the nation is interested in maintaining under arms the least number of soldiers that may be compatible with the conservation of order and tranquility.

3. Hence it follows that on a war footing the army may have many more effectives than when it is on a peace footing, and at the moment in which it is going to undertake a war, each battalion, each regiment and each unit must receive re-enforcements in order to pass from a peace footing to a war basis.

4. It is not only necessary to complete the personnel, but likewise wagons, animals and the general materials of war must be increased for the various units which are to enter a campaign.

5. The conjunction of operations, by means of which an army completes its personnel, animals and material in order to pass from a peace to a war footing, is called mobilization.

6. The mobilization of an army should be accomplished in the least time and with the greatest possible order, since that army which accomplishes its mobilization in a shorter time than its enemy will at once have over it a first and important advantage.

7. On terminating the mobilization, the several units find themselves ready for the campaign, but in the places which they occupy in time of peace—that is to say, disseminated over all the extension of the national territory; hence it is necessary to unite the various units in some selected region in order to constitute the army which is to enter the campaign.

8. The conjunction of operations necessary to transport the troops already mobilized to the region in which they were going to be united is called concentration; the zone or region in which they unite is the base of operations; the marches which the several units make from their barracks, occupied in time of peace, to the base of operations are called marches of concentration. The marches of concentration are made, in general, by railroad as far as the stations of disembarking, which are situated in rear of the base of operations.

*From the *Revista del Ejercito y Marina*, for April, 1909.

9. In the same manner as the mobilization, the concentration of an army should be accomplished with the greatest order and in the least possible time, since the army which may be first in concluding these two operations will be ready to undertake the campaign before its adversary, and will be able to attack the enemy before he finds himself ready to accept combat; the army which may have concentrated at an earlier time than its enemy will secure to itself the greatest probability of victory.

10. From the stations where the troops disembark the units march along the highways to the places which have been assigned to them in the base of operations which the army is to occupy. The distribution of the several units and services among the brigades, divisions, etc., that are formed is what is called the order of battle of the army, and the act of going to take the places or posts in the base, in accordance with what has just been said, is called the strategical change from the order of march to that of battle.

11. The strategical change from order of march to order of battle terminated, the army is completely ready to undertake active operation of the campaign; marching to attack its adversary, if the latter is weaker, or less prepared for the war, or awaiting the enemy, if the latter is the stronger, a well-chosen position prepared beforehand to receive with advantage the clash of the enemy; in the first case, it is said that the army takes the strategic offensive, and in the second, that it accepts the strategic defensive.

12. The preliminary operations that have been indicated in the preceding paragraph are intimately connected among themselves, since upon the rapidity of mobilization depends upon the time in which can be accomplished the concentration and upon the rapidity of the latter depends, in turn, the time in which the change from the order of march to the order of battle may be concluded.

13. The rapidity and order of mobilization should be insured in time of peace by means of a system of recruiting which would permit of giving instruction to the greatest possible number of men, and of an organization of reserves which would permit or provide for the prompt transportation from their homes, at a given moment, of all men who might incorporate themselves in the army in order to place it on a war footing; it is clear that for this purpose we shall be able to utilize the railroads, but that is not their most important employment, as will be seen in the following paragraph.

14. In order that the concentration may be accomplished rapidly it is convenient to utilize the railroads, causing the mobilized troops to be transported by railroad from their barracks to the zone of concentration, but it is not sufficient that the latter be done with rapidity; it is indispensable that it be done likewise with order and method.

15. However, all of the troops cannot utilize the railroads to arrive at their destination more rapidly than by marching over the common roads, since if they be employed in embarking and disembarking on or from a train a number of days greater than may be necessary to arrive at the post of concentration by means of marching, it is preferable that they do not travel by rail.

16. In order to make clear the sentence in the preceding paragraph, let us suppose that the transportation of a division of cavalry, to a place 100-kilometers distant, is considered. The division consists of 3 brigades of two regiments each, the regiments consisting of 5 squadrons plus 3 batteries. As will be seen in the regulations, each squadron or battery requires a special train, hence we will need

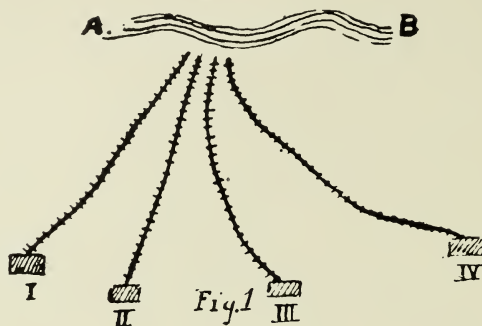
33 trains. It takes each squadron two hours to embark and another two hours, in like manner, to disembark; each battery embarks in two and one-half hours and disembarks in an equal time; therefore, supposing the troops perfectly instructed in embarking and disembarking its personnel and equipment, and hence losing no time in such operations, they will be employed in embarking $67\frac{1}{2}$ hours and an equal time in disembarking, or in the two operations 135 hours. It is necessary to add to this the time employed in going from the station of departure to the station of destination and, moreover, the interval of time which should be allowed between two consecutive trains in order to avoid wrecks, etc. (let us suppose that this interval is taken as 15 minutes, something extremely favorable, but which, owing to the grades in our country, one should consider impossible), we would thus have a total of 32 intervals, which is equal to 8 hours. Adding the time employed in the trip, which would be approximately 4 hours (supposing the velocity of the train to be 25 kilometers an hour), we have a total of 147 hours, or 6 days and 3 hours. In 6 days, marching at the regular rate of a column composed of all arms (28 kilometers a day)—that is to say, with a slower rate than that which in reality it would move, the division would have marched 168 kilometers. If it should march from 5:00 o'clock A.M. until 12 o'clock noon, at the rate of 8 kilometers an hour, alternating with the walk and the trot, it would travel daily 56 kilometers or 336 kilometers in 6 days, a distance equal to $3\frac{1}{3}$ times the 100 kilometers that it would have traveled in an equal time by train. The train would have arrived (following the line of the Inter Ocean) at about San Antonio Calpulalpam, whereas making the daily marches and following the same route, it would have arrived in an equal time some place near Perote.

17. By the foregoing example it is seen that the units which may be near the zone of concentration should be marched to the zone over the common roads, thus obtaining the advantage of leaving free the rolling stock to transport a great number of those troops which find themselves far from the zone of concentration, since for those troops the employment of the railroads is an evident advantage.

18. In fact, if instead of finding themselves at a distance of 100 kilometers from the place of destination, the division taken for the foregoing example should have to be transported from Mexico to Torreon, for example, something more than 1100 kilometers, it would spend in embarking and disembarking on and from the 33 trains mentioned the same time as before indicated—that is to say, 143 hours and 44 more in passage, at a rate of 25 kilometers an hour. It would thus be complete and disembark at Torreon in 8 days after having commenced the operation of embarking in Mexico; whereas, marching at the rate of 96 kilometers a day (12 hours at 8 kilometers an hour), a thing very difficult, it would arrive after 12 days completely exhausted. Making daily marches of 64 kilometers a day (8 hours from 5:00 A.M. until 1:00 P.M. at 8 kilometers an hour) it would arrive after 18 days, likewise very much ill used.

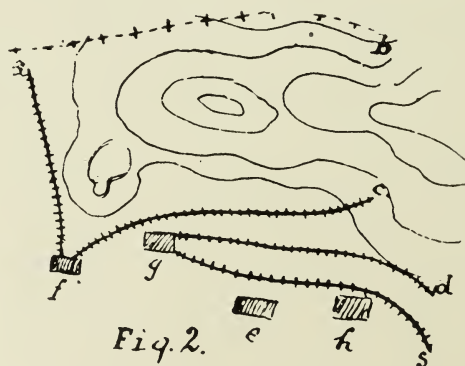
19. By this example can be understood how much the railroads can contribute toward diminishing the time employed in the concentration of an army at a great distance from the barracks which are occupied in time of peace. If we imagine that the river A-B (Fig. 1) marks the front of a zone of concentration and the lines I, II, III and IV the roads which leave the barracks and converge toward said zone, we see how we may concentrate a great number of troops on the front A-B in a given time.

20. It will be seen later the convenience resulting from great unit of the army (army corps or division), using a special road in order to conduct its troops to the zone of concentration, since if two units should have to use the same road, one of them would not be able to begin until the other should have terminated its own, and one will



readily understand that such an arrangement would retard the end of the concentration.

21. It is not sufficient that each grand unit command a separate railroad in order to transport its troops. It is necessary that the general outline of the railroads converge toward the chosen zone of concentration; since, as is clearly shown in Fig. 2, in order to concentrate in the zone a, b, the troops f, g, e, h would be able to utilize but the road f, a. The roads f, c; g, d; y, g, s, that do not converge toward the indicated zone are not serviceable, hence the four supposed



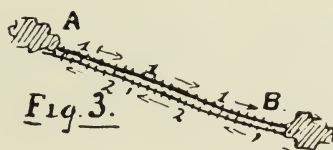
units would have to use successively the sole road f, a, thus losing considerable time.

22. The number of troops that can be transported over one railroad in a given time is very variable and depends upon many things. Let us suppose that from A to B (Fig. 3) there is one road of departure, 1, 1, 1, and another for returning, 2, 2, 2. It is clear that the troops which go by the way 1, 1, 1 after having disembarked at the station B can let the empty trains return to the station A by the way 2, 2, 2, there to receive more troops. In this manner there will be nothing to

interrupt the sending of troops from A to B, since there will not be rolling stock lacking at A, and neither will said material be detained at B, obstructing the disembarking of troops which may arrive.

23. If, instead of having two ways between the points A and B, there is only one, the result is that when a troop train goes out of A and arrives at B the empty train will not be able to return from that point to the place of starting A if the only way is occupied by new trains carrying troops, and there will come a time when the station B will be full of empty trains and the station A will yet remain with troops to be transported; hence it will be necessary that said troops wait the return of the trains, or the greater part of them, in order to embark for their destination. From the above it is readily seen that the service rendered by a double-track road is much greater than that of a single-track road.

24. The rate of travel on a single- or double-track road depends, of course, upon the distance which may have to be traveled, on the number of trains and locomotives which may be had and the good technical direction of the traffic, etc.; likewise, much depends upon the number of trains which may be loaded at the same time at the station of departure or unloaded simultaneously at the station of arrival. This condition depends in turn upon the number of ways of embarking and wharves and platforms which exist at the station of departure and arrival. Beyond this the number of trains which may



be able to depart from a station depends upon the interval of time which must necessarily be allowed between two successive trains and that in turn depends upon the distance between stations, and on the single-track railroad upon the distance between sidings or switches, by which trains coming from opposite directions may pass each other.

25. Finally, no matter what may be the kind of railroad and rolling material at its command, it will not be able to send out a sufficient number of trains in one day if at the designated time for departure of each train the troops have not completed their embarking. If the troops do not disembark in the prescribed time, they will produce in the final station grave disorder in the arrangement of the trains and their traffic. From what has been said it is seen that the number of troops that can be carried toward a zone of concentration, as likewise the rapidity and order of that important operation depend greatly upon the instruction which the troops may have received in the operations of embarking and disembarking which the respective regulations prescribe.

26. It has been seen before that upon the possibilities of concentration depends, in great part, the success of the campaign. The latter depends, consequently, upon the order and precision observed in the operations of embarking and disembarking—that is to say, upon the instruction of the troops; hence it is seen that great importance should be given to this instruction and the absolute necessity for proceeding to give it as soon as possible, subjecting all of the troops

to minute explanations of the prescribed regulations in order to obtain the necessary precision.

27. Not alone are railroads used as transports during concentration. During active operations they are used as a means for carrying fresh troops, which may determine in our favor an impending battle. Great detachments can be sent rapidly toward one of the enemy's flanks, possibly to envelope it or so direct it as to protect our own flanks from envelopment by the enemy.

28. On the marches of concentration, as well as during operation, the number of men that can travel in one train alone is limited by the number of cars that one locomotive can haul. Taking this into account, it results that the greatest number of troops that one military train can haul conveniently is a battalion of infantry or a squadron of cavalry or a battery of artillery or an equivalent unit of the trains and auxiliary services. That quantity of troops which one train can carry is called the unit of embarkation, and from it are compiled the rules and regulations governing the transportation of troops.

29. It will be understood that if a unit of embarkation is occupying the wharf or platform of a station in order to board a train which occupies in its turn the railway, no other unit can embark until the first may have finished, unless there be several wharves or platforms at the station.

30. Even in the case where there are several platforms the trains cannot go out immediately one behind the other. It is necessary that there be an interval of time between successive trains in order to avoid wrecks caused by a sudden detention of the trains in front. Such an accident would interrupt the traffic of the road with great prejudice to the military operations. The interval between two successive trains depends upon various technical considerations and very much upon the distance between the stations or points at which trains from opposite directions could pass each other, so it results where trains are found with a great distance from the preceding train the more slowly will be the transportation of the troops.

31. The railroads serve also to supply an army with many necessities—transporting rapidly from the stores or factories from the interior of the country to the theater of operations, re-enforcements, recruits, horses, ammunitions, arms, provisions, and everything which permits an army to be maintained in a fighting condition. The railroads serve, moreover, to carry to the interior of the country everything which obstructs an army in the theater of war, such as prisoners, materials in need of repairs, the spoils of war, etc., and they are also used to carry rapidly and with relative comfort the military sick and wounded. These latter are carried in conveniently arranged hospital trains as far as the base hospitals, and in this manner many lives are saved.

32. The service to which the previous paragraph refers has for its object the providing of an army with its needs and the freeing it of the things which are of no value to an army in the theater of operations. This is done in such a manner that by the effectiveness and aptitude of the material and personnel of the distinct arms and services which compose it, the army finds itself always in a state of preparedness to fight. This important service is accomplished by all the ways and means of communication which go from the army to the stores and places in the interior of the country where necessities are provided. The conjunction of railroads and roads which lead from the centers of supplies to the army is of vital importance.

[TO BE CONTINUED.]

INSTRUCTIONS FOR THE SELF-ENTRENCHMENT OF
ARTILLERY, 1909.*(Reprinted from the *Journal of the Royal Artillery.*)

1. *The Benefit of Cover.* To decrease the number of casualties caused by the enemy's fire, artillerymen must arrange for the necessary cover in their positions.

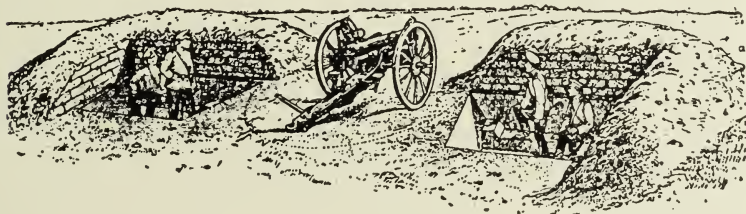
2. *Cover for the Detachments.* The simplest mode of obtaining cover for the personnel of a battery is to construct small trenches on either side of the guns (Fig. 1).

3. *Gun-pits.* If, in order to render the gun less conspicuous to the enemy, the gun platform is lowered below the surface of the ground, the entrenchment thus formed is called a gun-pit.†

4. Cover for look-out men and transmitting orderlies is afforded by constructing pits of a sufficient depth. From these pits a look-out man must be able to see all the ground to his front, and a transmitting orderly to his two neighbors.

5. The ground is usually composed of sand, mould or clay; of these three, sand offers the greatest resistance to bullets and fragments of shell, mould the next greatest, and clay the least. In winter parapets

FIG. 1.



of snow may be thrown up; such parapets are made, of course, more with the object of obtaining concealment than for the purpose of offering any resistance to the enemy's bullets.

6. *Entrenching Tools and Their Use.* The following entrenching tools are carried by field-artillery:

- (a) Spade.
- (b) Pick.
- (c) Hand-ax.
- (d) Crowbar.
- (e) Two-handed saw.

A man using the spade must force it into the ground in a slanting direction by pressing with his foot on the blade; he should endeavor to take out as large a lump of earth each time as possible, and should throw this lump forward in one mass, sliding his hand along the handle of the spade. Should the earth be hard, it must first be broken up with the pick or crowbar.

7. *Revetment of Parapet with Lumps of Earth and Sods.* Clay thrown up into a parapet will stand at a steeper angle than mould, and mould at a steeper angle than sand. But as the efficiency of the cover

*Translated from the official Russian hand-book, 30th December, 1909.

†In the figures measurements are given in arshin and denoted by (x). 1 arshin = 2 ft. 4 in., (+) means above ground level and (—) below.

along the forward side of the trench and the remainder continued to a depth of a further 1 ft. 2 in., making a total depth of 4 ft. 8 in. The parapet to the front and side of the trenches is built to a height of not more than 1 ft. 9 in., the balance of the earth being thrown on the outer sides of the trenches to afford better cover against enfilade fire (Fig. 2). If time permits, a ledge of 1 ft. 2 in. in depth should be made along the rear side of the detachment trenches for the ammunition trays, but if time is not available for this, the trays must be placed on the ground just behind the trenches. In easy soil if large shovels are used and the men work in two reliefs, the work should be completed in from one to two hours. With shielded guns, better cover can be afforded for Nos. 3, 4 and 5 by making a depression in the ground from 7 in. to 1 ft. 2 in. in depth near their positions in action. The earth taken out should be thrown to the front to fill up the spaces between the bottom of the shield and the ground; this, however, should not be done until the gun-carriage has ceased to recoil.

12. *Tracing and Construction of Gun-pits.* A semi-circle is marked out (toward the enemy) between the detachment trenches with a radius of three paces, taking a point midway between the detachment trenches as the center.

Four men with large shovels are told off to dig out the gun platform and should construct it as follows:

For mountain guns not deeper than 1 ft. 2 in.

For Q. F. guns of 1900 and 1902 pattern not deeper than 1 ft. 9 in. Howitzers, mortars, guns with threaded breech-block not deeper than 3 ft.

The forward side of the gun-pit must be made as steep as possible and the entrance, at the rear, slopped off to the level of the ground in a distance of from 4 to 5 paces.

In ordinary soil, with large shovels and in two reliefs, such a platform for a field-gun would take 1 to 2 hours.

13. *Cover for the Wagon Body.* Special cover is necessary for the concealment of the wagon body. In continuation of the left-hand detachment trench mark off a rectangle of 4 paces by $2\frac{1}{2}$. Four men are told off to this rectangle and sink it to a depth of 4 ft. 8 in., leaving along the front side at a depth of 3 ft. 6 in. a step (in continuation of the step of the detachment trench). The bottom is then sloped off to the level of the ground at a distance of about 14 ft. The earth taken out is thrown forward and to the left to form a parapet, which must not be made higher than 1 ft. 9 in. Such cover for the wagon body may be constructed independently of the gun-pit in some covered position, either behind or alongside the gun. In ordinary soil, with large shovels, the work will take from 2 to 3 hours.

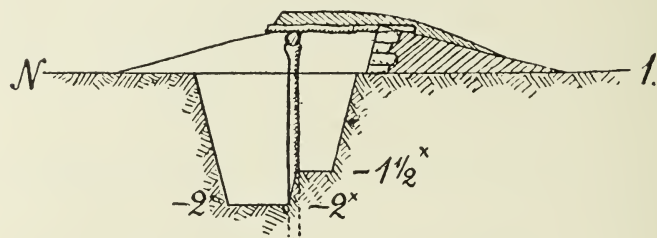
14. *Semi-overhead Cover.* To afford better cover from the enemy's shrapnel, semi-overhead cover is added to the detachment trenches (Fig 3). Into the bottom of the trench, and close up against the front step, are driven two poles, so that 1 ft. 2 in. is below ground and 7 ft. remain above. Another pole is laid across these two, and a row of poles or boards from this pole to the top of the parapet; a layer of brushwood is then laid on top and the whole covered with earth to a thickness of twice the breadth of one's palm. The brushwood is necessary to prevent the earth from falling through the cracks.

15. *Overhead Cover.* A couple of poles are laid respectively along the parapet and on the ground along the rear edge of the detachment trench; a row of poles or planks is then laid across the trench with their ends resting on these two poles and the whole is finished off

with brushwood and earth as described in (14). The supporting baulks should not be less than $2\frac{1}{2}$ in. in diameter, and the planks not less than $1\frac{3}{4}$ in. thick. To enable the men to get in and out of the trench with ease the cross-planks must not be laid within a couple feet of the inner rear corner of the trench.

16. *Communication Trenches.* To ensure freedom of movement between the guns, the detachment trenches are connected up by means

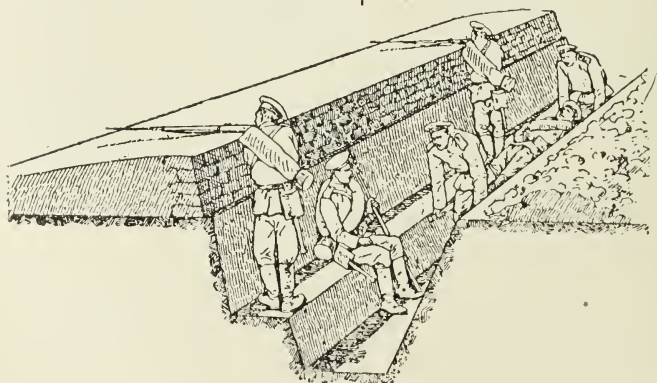
FIG. 3.



of communication trenches. These trenches should be 4 ft. 8 in. deep and 1 pace in width at the bottom; the earth taken out is thrown up into a parapet 1 ft. 9 in. in height. Any superfluous earth is thrown to the rear. To enable the battery to advance freely to its front, sections may be left unconnected with one another.

If time is available and it seems advisable, communication may be established with the rear by means of similar trenches. They may be led in any direction, but must on no account interfere with the free

FIG. 4.



movement of the battery, and must be so arranged that the enemy cannot enfilade them. For this reason they are usually built in the form of "zig-zags."

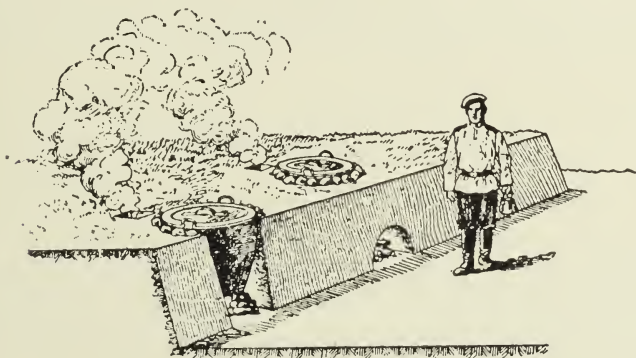
17. *Observation Points.* For the successful conduct of fire, it is necessary to watch the burst of the shell and to carefully follow the movements of the enemy, and for this purpose it may often be necessary

to select special observation points for look-out men and for the officer observing the fire at some distance from the battery. These points must be connected with the battery by orderlies, telephone or signalers to ensure speedy transmission of orders and observations, and must be so selected that the observers and look-out men can see all the ground to their front, and yet remain hidden from the enemy; the officer observing the fire must, in addition, be so placed that he can see at least one gun of his battery. It is obvious that cover will often have to be constructed at these observation points. If the observation point is on high ground, cover is afforded by digging a hole the depth of a man, leaving a step at such a height that, by standing on it, all the ground to the front may be seen. The observer's head is protected by sandbags, sods, etc.

18. Semi-overhead and overhead cover for observation point is constructed as described in (14) and (15).

19. *Masking.* All artillery cover which is constructed in the open should be most carefully masked (8), and particular attention should

FIG. 5.



be devoted to masking observation points, which must necessarily often be constructed in the open.

20. *Latrines.* Latrines should be dug close to the gun-pits and may be connected with them by communication trenches.

21. *Fire Trenches* consist of a ditch and parapet (Fig. 4). The parapet forms a rest for the rifle, and in the ditch the men are under cover and can move freely from point to point. Notches for the rifles to rest in may be cut in the top of the parapet, and these notches, when covered over, are called loop-holes.

Fire trenches may be constructed in the form of a trench alone, without a parapet; if it is desired to construct such a trench, the earth taken out must be spread over the surrounding ground. At long ranges it is very difficult to pick out the parapet of the enemy's trenches because they are carefully masked, nothing, as a rule, being visible but the heads of the defenders or the loop-holes.

22. *Field-works* differ from fire trenches in that they are completely surrounded by a trench and embankment, so that fire from them may be developed in any direction required, not only from the front, but also from the flanks and rear; they are, moreover, surrounded by obstacles which prevent the enemy from rushing them.

The parapets of field-works are made thicker and sometimes higher than those of fire trenches. When this is the case, the extra earth required is obtained from an exterior trench, which also answers the purpose of an obstacle. Field-works are constructed in the most important parts of the position, and must be carefully masked so as to render them invisible to the enemy.

23. *Artificial Obstacles.* Obstacles make it more difficult for the enemy to approach the field-works and trenches, and should usually be placed at a distance of from 50 to 70 paces from the latter; they should measure from 6 to 9 paces from the front to rear. Obstacles are often covered by a parapet which protects and hides them from the enemy. The following are the most common:

- (i) Abbatis.
- (ii) Wire entanglements.
- (iii) Military pits.

Military pits are often combined with wire entanglements.

24. *Field-kitchens* (Fig. 5). To construct a field-kitchen a trench should be sunk and on one side of it a recess cut rather larger than the kettle. The kettle is placed on stones in the recess. Thus forming a space for the fire underneath it. The space between the kettle and the sides of the recess is covered with sods or stones. A chimney is made to lead off the smoke.

FEEDING CAVALRY HORSES.

RATIONS TO BE CAREFULLY MEASURED—DIFFERENT DIETS.

(*Special Correspondence of the Evening Post.*)

TOPEKA, KAN., July 14.—The feeding of 884 cavalry horses stationed at Fort Riley, Kan., is to be entrusted to the Kansas State Agricultural College on and after October 1st. Their rations will be weighed and measured with great care and accuracy, and the animals will be divided into groups, and each group fed a different ration. Each day's menu will be just like that of the day before, but one group will get a diet of oats and hay, while another will have part oats and part corn, with hay trimmings, and a third group will receive the main course of oats with a small side order of corn and hay for dessert.

The animal husbandry department of the Kansas college has been anxious to conduct such an experiment for some time, but was not able to find a large enough bunch of horses available for the tests. Then the present idea occurred to Professor Kinzer, and he suggested it to the officers at Fort Riley, and they to the War Department at Washington. The War Department took it up with the Agricultural Department, and finally word came back that both had officially approved the plan. The object of the experiment is to find out what is the best and most economical ration for the maintenance of the horse. For years the army horse has had the same menu with the regularity of clock-work, consisting of 12 pounds of oats and 14 pounds of wild hay, and many of the artillery officers contend that it is impossible to improve upon it. Whether or not this is true will be proved by the experiment, for the test will be made upon horses having the same work, same exercise and same time of feeding. In fact, all of them will be treated as nearly alike as animals can be treated by different individuals, leaving no chance for variation in results.

The group that will be fed the regular army ration of 12 pounds of oats and 14 pounds of wild hay will be used as a check for the other groups. For five months the other sections will be placed on the following rations:

- Group No. 1.—12 pounds oats, 14 pounds prairie hay.
- Group No. 2.—12 pounds corn, 14 pounds prairie hay.
- Group No. 3.—8 pounds oats, 4 pounds corn, 14 pounds prairie hay.
- Group No. 4.—8 pounds oats, 4 pounds corn, 14 pounds timothy hay.
- Group No. 5.—4 pounds oats, 8 pounds corn, 14 pounds prairie hay.
- Group No. 6.—4 pounds oats, 6 pounds corn, 12 pounds prairie hay, 4 pounds alfalfa meal.
- Group No. 7.—4 pounds oats, 6 pounds corn, 12 pounds timothy hay, 4 pounds alfalfa meal.
- Group No. 8.—4 pounds oats, 6 pounds corn, 12 pounds prairie hay, 4 pounds bran.
- Group No. 9.—4 pounds oats, 6 pounds corn, 12 pounds timothy hay, 4 pounds bran.
- Group No. 10.—4 pounds oats, 6 pounds corn, 12 pounds prairie hay, 1 pound linseed meal.
- Group No. 11.—12 pounds barley, 14 pounds prairie hay.
- Group No. 12.—8 pounds corn, 2 pounds oats, 10 pounds alfalfa hay.
- Group No. 13.—4 pounds corn, 2 pounds oats, 14 pounds wild oats hay.
- Group No. 14.—4 pounds corn, 2 pounds oats, 12 pounds barley hay.
- Group No. 15.—10 pounds clipped oats, 12 pounds prairie hay.
- Group No. 16.—6 pounds corn, 12 pounds prairie hay, 6 pounds barley hay.
- Group No. 17.—6 pounds corn, 10 pounds prairie hay, 4 pounds barley hay.
- Group No. 18.—10 pounds oats, 14 pounds prairie hay, sugar.

When the experiment was proposed, Colonel Hoyle, commandant of the artillery post at Fort Riley, who is an enthusiastic horseman, expressed himself as being in favor of it. The expense of the feed for the horses will be borne by the Government, and the work will be conducted under the direction of Dr. Wilbur McCampbell, a graduate of the School of Veterinary Medicine of the Kansas Agricultural College.

RECONNOITERING FROM AN AEROPLANE.

(*Scientific American.*)

IN order to demonstrate the availability of the modern biplane for military reconnoitering, two infantry officers of the French Army, Captain Marconnet and Lieutenant Féquent, were detailed by the Ministry of War to fly from the camp at Châlons to the military aviation grounds of Vincennes (Paris), and to report with photographs of the terrane over which they had flown. Lieutenant Féquent was to pilot the machine, and Captain Marconnet was to act as the commander of the biplane, as well as the observer. The flight was to take place on June 8, 1910, but had to be postponed on account of foggy weather. On the 9th of June, at 4.40 P. M., a Farman biplane with the two officers started on its journey.

Since the pilot had all he could do to control the machine, Captain Marconnet had to take the barometric readings, work the camera and keep track of the chart, indicating the route to be followed. On account

of the deafening noise of the motor, the two officers communicated with each other by speaking horns and tubes. A special transmitting and receiving apparatus was devised, which was strapped upon the head and shoulders of the pilot.

A height of 1600 feet was attained and a speed of about 35 miles an hour. At ten minutes after seven the aeroplane alighted at Vincennes.

Captain Marconnet reports that the military utility of the biplane is not to be underestimated. In his opinion the commander of an army corps could easily be kept informed of an enemy's movements within a radius of fifty miles.

Captain Marconnet is shown in our photograph using a map wound on two cylinders so that he can roll it from one to the other. The back of Lieutenant Féquent serves as a support.

The photographic apparatus, to which reference has been made, was fixed below the seat. It seems that excellent photographs were taken of the terrane covered.





Genius of Naval Warfare.*

IT is a notable fact that the naval profession has always looked to the French for the latest and best treatises on naval tactics. We, ourselves, were brought up, so to speak, on Paul Hoste, whose work on naval tactics, written in 1696, has served as the root out of which all other treatises on that subject have sprung. Père l'Hoste was chaplain to Admiral de la Moignon, the latter spoken of by Macaulay as the ablest maritime commander France then, 1690, possessed. He had studied every part of his profession; to the dauntless courage of a seaman he added the urbanity of an accomplished gentleman. It was Tourville's tactics, then, that for nearly a century and a half was the accepted authority on that subject. In due course came the treatises of D'Orvilliers, who fought the drawn battle with Keppel, de Grenier, Morogues, Chopart, whose work was, at one time, used at the Naval Academy, Bouet-Willaumez, the official *Tactique Navale* of 1857, and others of more or less note. *Guerres Maritimes*, by Admiral Jurien de la Gravière is a standard work indispensable to the library of every naval officer. To this very incomplete list of works and distinguished authors of the French Navy we must now add *War on the Sea*, by Captain Darreius, whose valuable work has been already reviewed, and last but by no means least, we have the pleasure of calling the attention of our readers, lay as well as professional, to the "Genius of Naval Warfare," by Commander Daveluy of the French Navy. This latest contribution to the literature of the profession is replete with valuable suggestions to officers of our own, and indeed to those of every navy, and its references to the stirring events of the past cannot fail to interest the general reader. The author's comments on American methods of carrying on war are both just and discriminating. Where there is so much that is good it is difficult to make selections; but we cannot forbear transcribing the following, page 184: "If the faults of others can console us for our own, we shall find satisfaction in the way the Americans organized the transport and landing of the expeditionary corps at Santiago." It was, in truth, a very discreditable piece of business. On page 182 he had related, by way of comparison no doubt, how

**The Genius of Naval Warfare*. By René Daveluy, Commander, French Navy. Translated by Philip R. Alger, Professor, United States Navy. 1910.

the expedition to the Crimea had been landed. But then we are not a military people; a poor and an inadequate excuse. On page 227 the author compares the American method of the blockade of Santiago—"a military blockade established on the principle of a commercial blockade," as he describes it—with the blockade of Port Arthur by Togo. On a previous page he gives Nelson's views of a blockade. In his letters to the Admiralty Nelson declared that his object was *not* to prevent the French from coming out; but only to fight them if they did come out. There are no hard and fast rules for carrying on war at sea. Circumstances alter cases. At the siege of Tyre by Alexander the Great, the Tyrians, on the approach of Cyprian and Phœnician fleets, called in their own fleet and sunk triremes—the battle-ships of that day—in the channel ways to block the entrance to their harbor; and twenty-two centuries later the Russians, on the breaking out of the Crimean War, as the author tells us, resorted to the same expedient at Sebastopol to bar the entrance of the combined fleets of England and France. The conditions of the Spanish-American War, however, were altogether different from those cited, and had to be met as they presented themselves.

Much as there is to commend in this excellent work, we feel compelled to dissent from the author's views as to the value of the war game. "It is impossible with toys," he says, page 260, "to approach even remotely to the reality, and there is risk of warping one's judgment by taking seriously what is only a game." The war game is simply *Kriegsspiel* applied to naval operations, and what *Kriegsspiel* accomplished for the German Army is known to all the world. We cheerfully commend this work to the attention of our readers. The author's candor in treating of the affairs of the French Navy is certainly refreshing and lends great value to his opinions.

We look forward with much interest to the author's Vol. II on *Tactics*; and, at this particular time, the appearance of Vol. III on *Organisation* will be cordially welcomed in this country.

S. B. LUCE,
Rear Admiral, U. S. N.

Field Fortification.*

THE title page of this little work states that it is "specially designed and arranged for the use of officers preparing for promotion examinations." The object of the book is concisely outlined in the preface to the fifth edition as follows: "Special attention has been paid to the practical side of the subject, and the example of a small tactical scheme worked out with limited time and tools, in Chapter XII, will, it is hoped, prove useful both for examination and practical purposes. The examples worked out in the text should clear up most difficulties." The book contains 232 pages of text, divided into fifteen chapters, illustrated by thirty-four full page plates, and with twenty more pages of practical questions. A study of the work shows how thoroughly the authors have succeeded in attaining their object, and if further evidence were needed, it is given by the fact that the book is now in its sixth edition.

**Field Fortification: Notes on the Text-Books.* By Lieut.-Gen. H. D. Hutchinson, C. S. I., corrected to date by Col. A. C. Macdonnell, late R. E. (London and Aldershot.) Gale & Polden, Ltd. Sixth Edition, 1910.

Quite properly for a practical book on field fortifications, the first chapter describes the arms and projectiles in use in the British Army, the fields of fire, penetrations, angles of fall, and bursting effects of shells, thus calling to mind the cover which must be provided as well as the provisions necessary for offensive work. The arms in use by the civilized nations of the world vary little in range, penetration and destructive effects, so that the figures given are of general application. The types of works described for cover for the defensive and for obstructions to the offensive and the arrangements for offensive-defensive operations are in general conformity to the most modern practice. The rules given for the size of working details, for the size of tasks and for time required are conservative and in general accord with those prescribed for our service. Since the British Army uses gun-cotton for demolition purposes their formulæ for charges vary from those required for dynamite or other explosives in common use in the United States.

The book forms a useful complement to our Condensed Engineer Field Manual and will prove of value to students of field fortification.

W. M. B.

Tactical Principles and Problems.*

IN theoretical tactical matters the service has been too prone to attempt to teach second lieutenants the duties of brigadier-generals.

The larger portion of the theoretical problems over which the younger officers of the army have labored have been those involving the use of the three mobile arms—in a word, problems which, in campaign, confront a brigade commander.

Captain Hanna prefaces his book with the remark that it "has been written in the hope that it may help junior officers of the regular service and militia who are beginning the study of tactics." The work is not intended to supplant those of the nature of Griepenkerl's *Letters on Applied Tactics*, but, on the contrary, to lead up to a proper study of advanced tactics by furnishing a foundation which is essential to a thorough understanding of the more complicated problems of handling the three arms combined.

The painstaking manner in which the author has gone about his work of preparing this volume is abundantly evident throughout the whole book. From cover to cover it is excellent. It is logically framed and clearly written. Most of the chapters are arranged in pairs—that is, the same kind of problem is discussed in at least two consecutive chapters; and the problems are arranged in progression from the leading of an infantry patrol through an advance (including the conduct of the advance guard), a retreat (including the conduct of the rear guard), a pursuit, an attack, a defense, a halt for the night, and dispositions of outposts. Infantry and cavalry only are discussed.

The method of handling the subject matter is very good. For instance, Chapters I and II are on "Leading of an Infantry Patrol." Chapter I begins by a statement of the *Situation*. Then follows in succession the *Solution*, with a discussion of the tactical principles involved up to a certain point in the progress of the patrol, where a *Continuation* of the *Situation* is stated, followed by a *Continuation* of the *Solution*,

**Tactical Principles and Problems*. By Matthew Elting Hanna, Captain Third United States Cavalry. (Menasha, Wis.) Y. Banta Pub. Co. 1910.

this process being continued until the student, who is himself conducting the patrol, returns with his final report. The discussions of the various situations are excellent. Chapter II is framed somewhat differently. The student is supposed to have understood the explanations of the principles discussed in Chapter I. He can now handle the same kind of a problem with greater facility than before. But now he must go at the matter differently if he follows the sound advice of the author. By perusal of the preface he has discovered that he is expected to do some harder work than before. "He should make his own solution, *preferably in writing*, before reading the solution and comments given in the text." And right here, it may be remarked, is where great profit is to be derived if the advice of the author, who is an experienced instructor, be followed.

The author truly remarks that this method will require work, and he also truly adds that a method of learning tactics that does not involve labor has not yet been devised.

The book furnishes a most satisfactory six months' course in elementary tactics. By considering a chapter each week the twenty-six chapters fulfil to a nicety a long-felt need of the service for a book that will teach the first principles of tactics without any other instructor.

This method of assuming a state of war, stating a situation in which a commander finds himself, including the purposes of his operations as outlined or specified by higher authority, and then assuming that the student is that commander or one of his subordinates and is compelled, by the circumstances in which he finds himself, to work out his own salvation, which he does theoretically on a map, constitutes what is known as the "applicatory method." No better method of teaching tactics theoretically has yet been devised, and it is invaluable in our service, where there is such great lack of opportunity for practical work to instruct our officers each in the duties pertaining to his grade.

It has been recognized by military students that foreign tactical works, of which there are many excellent ones, are unsuited to our needs. There are two principal reasons for this. In the first place, our organization differs from that of other armies of the world. Tactical works of a country are written in view of the military system of that country, and a substitution of different units and combinations of units made necessary to adapt the work to a different organization of course causes confusion and lack of clear, tactical deductions. This is in addition to the fact, well known to all readers—non-technical as well as technical—that a translation of a work from its original tongue always detracts from its charm, and not unfrequently changes the meaning materially. In the second place, none of the military works so far translated into English have furnished a satisfactory exposition of the elementary principles of tactics. We find that abroad, as well as in the United States, everyone who aspires to military rank wants to be a general officer. When we consider, too, that we have officers in our service abundantly qualified to write these very books we see no real reason why we should be dependent on foreign productions, and Captain Hanna has supplied our needs in such an acceptable manner that the service owes him a debt of gratitude.

The mechanical features of the book are good. It is well bound, the paper is good and the print is excellent. The paper on which the two maps that accompany the volume are printed is, however, not of sufficiently good quality to stand the hard wear that will be given them.

A word regarding the author and his services will not be amiss. Captain Hanna graduated from the U. S. Military Academy in 1897.

He served in Cuba, was at San Juan Hill and the siege of Santiago, was subsequently aide to General Wood while the latter was serving in Cuba, was at the head of the Cuban public school system for two years (1900-1902), during which time he thoroughly reorganized the schools, was military attaché to Cuba, 1902-1904, graduated at the head of his class in the Infantry and Cavalry School, Fort Leavenworth, Kansas, class of 1906, and graduated the next year from the Staff College, Fort Leavenworth. From that time until the present year he has served as an instructor in the Department of Military Art, in the Service Schools, and has been instructor and umpire at various maneuver camps. He has recently been ordered to duty at the War College, Washington. It would thus clearly appear that the author is splendidly fitted for the production of a book on tactical principles, and he has not disappointed his friends, for the book is deserving of high praise.

O. E. HUNT,

Captain, Thirtieth Infantry.

The Service of Coast Artillery.*

THIS book by Capt. Frank T. Hines of the Regular Coast Artillery, and Major Franklin W. Ward, of the Coast Artillery of the State of New York, is one which at once attracts more than the casual notice of the coast artilleryman, both on account of the complete manner in which the authors treat their subject and from the way in which the text is illustrated by many excellent plates.

The first chapter contains a very complete list of definitions of coast artillery terms which is in itself a good artillery dictionary. Many of the terms are explained in detail not usual in works of this class.

The next chapter is devoted to the theory of defense of the seacoast from attacks both by land and sea.

The authors then have a chapter given over to the tactical and administrative organization of the coast artillery service, together with the personnel assigned to it with a description of their duties.

The next chapter embraces gunnery and ballistics, and while the authors do not treat this subject in as mathematical a manner as is done in some text-books on gunnery, yet their handling of it is very clear and simple and answers the purpose for which the book was written.

Probably the most interesting part of the book is the chapter on armament, in which the authors describe in detail the different kinds of guns and carriages, embracing the primary, intermediate and secondary armament. The text of this chapter is illustrated by a set of plates which are the best thus far seen.

The next chapter treats of explosives, projectiles, primers and fuses and is also profusely illustrated.

The authors have next described the different instruments, devices and charts used in the artillery service, together with their use and adjustments. The contents of this one chapter will prove most beneficial to artillerymen, as the information contained in it has heretofore been found in several individual publications, such as drill regulations and pamphlets which are not always at hand.

**The Service of Coast Artillery.* By F. J. Hines, Capt. C. A. C., U. S. A., and F. W. Ward, Major C. A. C., N. G., N. Y. (New York.) Goodenough & Woglom Co. 1910.

The next three chapters are devoted to search-lights, submarine defense and seacoast engineering, while two more chapters contain information in regard to cordage and the magazine rifle.

The last chapter is devoted to points for coast-artillerymen and embraces among other things battle-command drill, search-light commands, solution of target practice problems, adjustment of the guns and carriages before target practice, duties of the range, emplacements and tug officers.

One of the problems of the defense of the seacoast at this time is the organization of a coast-artillery reserve from the militia of the several States bordering on the seacoast. This organization is nearly completed and the training of the troops of this reserve is being carried out in several of the States under the supervision of regular artillery officers, and owing to the fact that many of the reserves come in contact with coast artillery material only for a very few days each year, the instructors have found their duties difficult from the lack of a suitable text-book, properly illustrated, which want is fully met by the "Service of Coast Artillery," a copy of which should be in the hands of all artillery officers, both regular and reserve.

J. B. M.

General Sherman's Letters.*

THESE reveal a more intimate side of General Sherman's nature than the *Memoirs* and *Letters* heretofore published. They consist principally of letters written to Miss Ellen Boyle Ewing, who, in 1850, became his wife. They trace his life from his entrance to the U. S. Military Academy, in 1836, to his death, in 1891. Of course there are considerable periods of time not accounted for, due to the character of the letters, the correspondence covering only those periods during which he was absent from his wife and that period prior to his marriage.

Owing to his very active life, in California, in New York, in Louisiana and in St. Louis, in addition to the period of the Civil War, his immediate family was of necessity absent from him for considerable lengths of time; and to this circumstance we owe the opportunity to view, somewhat more intimately than before, the inner life of this great man. In these letters his strong character shines without affectation.

His lamentations over lost opportunities during the Mexican War, for a considerable portion of which he was on the high seas, *en route* from New York to California via Cape Horn, afford an insight into his soldierly proclivities not heretofore shown in any published records.

His military and civil life in California are somewhat interesting, and his civil career in New York, Louisiana and St. Louis, prior to the Civil War, is vividly depicted. He frequently expresses regret at having resigned from the Army, and refers to himself as a "Jonah" in business, saying, at one time, that he feared for the safety of Wall Street should he embark on any business enterprise there. Everything he touched seemed, apparently through no fault of his own, to fail.

During the first years of the Civil War he avoided publicity; and accepted general notice only when it was thrust upon him. His innate modesty, coupled with his own confidence in his latent powers, makes a combination that is shown clearly in these privileged communications. As his successes developed he expressed to his wife his gratification that

**Home Letters of General Sherman.* Edited by M. A. DeWolfe Howe. (New York.) C. Scribner's Sons. 1909.

he has made good, and through it all there runs a slight thread of self-glorification not at all improper in these letters. Of course he never dreamed that they would see the light of day, else self praise, we are most sure, would have been scrupulously avoided. His estimate of himself is most interesting in that it shows what history has expressed of him—his remarkable farsightedness and his occasional blindness to near objects. His prognostications regarding the progress of the Civil War, made even before Bull Run, show the remarkable farsighted judgment of the man. Of course all these facts have been developed in other publications, but here we have collateral evidence in an intimate form. Grant he always held in high regard; at first not as a brilliant man, but as a steady, reliable soldier; and his associations and close friendship with that great leader he held in after years to be among the most valued treasures of his life.

In places the book is dry to dullness, but the average of interest for the reader is good, and in parts it is very attractive. It is apparent that much matter of value and interest has been omitted in editing, but that must necessarily have been the case, owing to the sacred character of the correspondence, and probably those parts of the letters discarded could not, after all, have added anything that the public has a right to know regarding the life and character of the man who, after Grant, should be given most credit for the military successes leading to the reconsolidation of the Union.

O. E. HUNT,
Captain, Thirtieth Infantry.

Last American Frontier.*

PROFESSOR PAXSON announces in his preface that this work is simply a sort of preliminary sketch, covering information of which later to exploit the detail in larger and more elaborate form, and in which it is inferred that he will cite the authorities for the statements found in this. While such citation is always more or less to be desired in a work alleging historical accuracy, it would appear to be a necessity in the light of the almost unbelievable relation here found. Of the manner in which the millions of acres, which a century ago were in undisputed possession of the red men, were gradually transferred to recognized ownership of the white in open and deliberate defiance of every law, human and divine, recognized as such among beings held as civilized since the days of Christ—not to go further back to the dawn of anything known as morality.

The process was simple and usually the same; the Indian would be induced, partly through persuasion, partly through covert threat on the part of duly accredited representatives of their "Great Father" at Washington, and in consideration of certain promises and engagements made in form of a "Treaty," to surrender a certain portion of the territory to which their ownership was freely acknowledged, they to be "forever secured and guaranteed" in undisturbed possession of the remainder.

It was found only necessary to repeat this operation at intervals in order to gradually acquire, slice by slice, the whole of the lands of any tribe and of all the tribes in succession, edging them off into

**Last American Frontier.* By Frederic Logan Paxson, Junior Professor of American History in the University of Michigan. (New York.) The MacMillan Company. 1910.

the nowhere. When they complained that promises made them were not kept, they were comforted with more promises in consideration of more yielding on their part, which set of promises, like the first, were in great part or wholly ignored. When lawless whites, deliberately trampled on every treaty stipulation, forcibly took possession of lands which the treaty "forever secured and confirmed" to the Indian, and the Indian appeared to resent it, the United States would build a fort and send troops to defend a colonization which is prohibited by law and treaty alike. Professor Paxson writes fairly and generally impartially, with evident desire to make the best possible case for the whites, but without striking result in this direction. His work shows deep research in directions little known, is interesting, instructive and exasperating.

J. N. A.

The Trumpeter's Manual.*

IN this work the author has set himself the task to cover a field which is of considerable importance to the Services, and which has altogether been too much neglected and allowed to shift for itself as best it may. With a manual of this kind the trumpeters throughout the Services ought to be brought up to a high state of efficiency.

The entire subject is presented in a clear, concise, yet comprehensive manner. The chapter on the "Rudiments of Trumpet Music" is of special value to the novice in music, and of particular importance to the beginner on the trumpet. The explanations on breathing and tonguing are sufficient in extent to cover the subject. The author uses the term "field musician" in several places, deriving it from "field music," and while the former term is not officially authorized it would no doubt be a good idea to have it thus adopted. The extent of the exercises in time, single tonguing, on the slur and syncopation is somewhat brief and could well have been enlarged.

It would have been probably better if the notes in the triple tonguing exercises had not been quite so much crowded, as notes will not only appear easier of rendition to a beginner if they occupy more space, but they are actually more easy to read in that shape until one becomes an accomplished musician. The instructions for the "Musician of the Guard" are very comprehensive and many uncertain points are cleared up. Useful information is found in the chapter on ceremonies, with special reference to the duties of the field music. Under "Honors Rendered by the Trumpet" a detailed statement is given showing the flourishes to be sounded for the various military, naval and diplomatic officials.

The chapter on "Training Trumpet Corps" is one of the best in this little volume and contains many essential features which should not be lost sight of in properly training trumpeters for the efficient performance of their duties. A comparative descriptive list of Army and Navy trumpet calls covers some twelve pages, which is followed by the calls of both services, a number of marches and other martial pieces.

The explanations pertaining to the "First Exercises," embracing the slur, dotted notes, syncopation, staccato tonguing, triple and double tonguing should have been placed on the several pages either imme-

**The Trumpeter's Manual.* Compiled by Nathan C. Lombard, Chief Trumpeter Coast Artillery Corps, M. V. M. (Boston.) The Lombard Co., Sole Agents. 1910. (Postpaid, \$1.50.)

diately above or underneath the various exercises as a matter of convenience. In this manual the text is too far separated from the notes.

On the whole this text-book is excellently gotten up, of convenient size, clearly sub-headed in distinctive type, with the notes engraved in superior quality, printed on good paper and well bound. It should be in the hands of every trumpeter in the service of the United States and those in the National Guard. Also those in charge of trumpeters should have a copy of this manual for their own information, reference and guidance. The author is to be complimented on the successful manner with which he presents this subject.

G. A. WIESER,
First Lieutenant, Fifteenth Infantry.

Why Friends (Quakers) Do Not Baptize with Water.*

THIS little book is well written, and presents the views of the sect which it represents with accuracy and cleverness. The margins of its seventy pages bristle with text reference to Holy Scripture which, while generally apposite, are as generally open to the charge of proving too much. This is a failing inherent in all religious bodies that take a stand more or less opposed to the teachings and practices of the church which was in existence a score of years before a line of the New Testament was written, and the writer of this book deserves to be complimented for the excellent way in which he has handled a difficult question.

The title suggests a contradiction in terms, for neither Webster's Dictionary nor historic Christianity recognizes the use of the word "baptize" except as involving the element of water.

It would be a fairer title and one not open to objection from the philologist or the churchman had it been called: "Why Friends (Quakers) Do Not Baptize." E. B. S.

The Battle of Gettysburg.

IN the *Cavalry Journal* (for July, 1910), generous space is given to the protest of the survivors of the Philadelphia Brigade (which bore a prominent part in repelling "Pickett's Charge"), and other participants in the battle, who question the truth of certain statements made by the author of a war-time pamphlet recently reprinted by the Massachusetts Commandery of the Loyal Legion and subsequently published as a serial by our contemporary. In this connection we would call attention to a review of this pamphlet published in the *JOURNAL OF THE MILITARY SERVICE INSTITUTION* (September, 1909), and written by a general officer mentioned in the narrative as a witness who, nevertheless, flatly contradicts Lieutenant Haskell.

The truthful historian is seldom a word-painter, nor can his literary style invariably be termed "classic." [THE EDITOR.]

**Why Friends (Quakers) Do Not Baptize with Water.* By James H. Moon, Fallsington, Pa., 1909. Copyright by the author. Press of the Leeds & Biddle Co., Philadelphia.

Books Received for Library and Review.

Routledge's Every Man's Cyclopedia of Biography, History, Geography, General Information, Law, Spelling, Abbreviations, Synonyms, Pseudonyms, etc., etc. Edited by Arnold Villiers. (London.) George Routledge & Sons, Ltd. (New York.) E. P. Dutton & Co. 1910.

A Handbook of the Boer War. With General Map of South Africa and eighteen Sketch Maps and Plans. (London.) Gale & Polden, Ltd.

The Genius of Naval Warfare. I. Strategy. 2d Edition of a Study of Naval Strategy. By René Daveluy, Commander French Navy; translated by Philip R. Alger, Professor, United States Navy. (Annapolis, Md.) The United States Naval Institute. 1910.

A Catechism of Manual of Guard Duty, United States Army. By Wyatt O. Selkirk, First Lieutenant Coast Artillery Corps, United States Army. 1st Edition. (New York.) John Wiley & Sons. 1910.

Our Exchanges.

American Society of Civil Engineers (to date).

Army and Navy Journal (to date).

Army and Navy Chronicle (London) (August, 1910).

Artilleristische Monatshefte (to date).

Artilleri-Tidskrift (to date).

Arms and the Man (to date).

Bulletin American Geographical Society (August, 1910).

Current Literature (August, 1910).

Journal of the Association of Military Surgeons (August, 1910).

Journal of the Royal Artillery (August, 1910).

Journal of the U. S. Artillery (July and August, 1910).

Journal of the U. S. Cavalry Association (July, 1910).

Journal of the U. S. Infantry Association (July, 1910).

Journal of the Royal U. S. Institution (August, 1910).

Journal U. S. Institution of India (July, 1910).

Journal of the Western Society of Engineers (August, 1910).

La Revue Technique (to date).

La Belgique Militaire (to date).

Our State Army and Navy (Penna.) (to date).

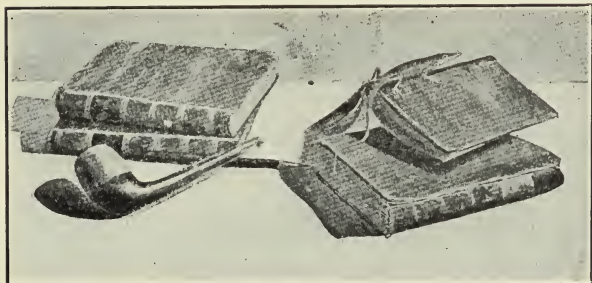
Pennsylvania Mag. of Hist. and Biog. (July, 1910).

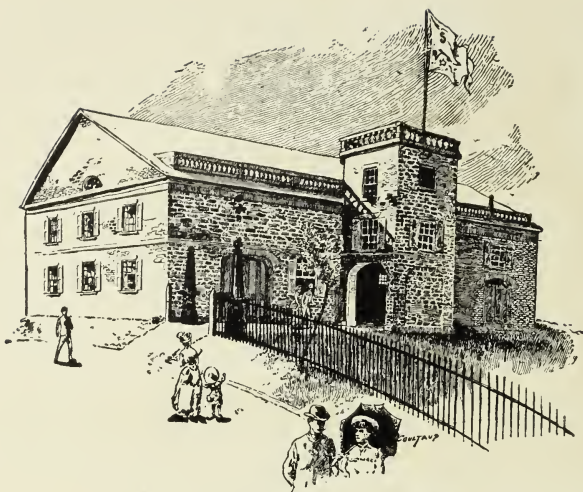
Political Science Quarterly (June, 1910).

Proceedings of the U. S. Naval Institute (June, 1910).

Review of Reviews (to date).

- Revista di Artiglieria e Genio* (to date).
Revista Del Ejercito Y Marina (July, 1910).
Revue de l'Armee Belge (to date).
Revue Militaire (to date).
Revue Artillerie (to date).
Royal Engineers' Journal (to date).
The Army Service Corps Quarterly (to date).
The Arrow, Indian Industrial School (to date).
The Cavalry Journal (London) (July, 1910).
The Century Magazine (to date).
The District Call (to date).
The Red Man (May, 1910).
The Medical Record (to date).
The Pennsylvania German (August, 1910).
The Popular Science Monthly (August, 1910).
The Scientific American (to date).
The Seventh Regiment Gazette (to date).
United Service Gazette (London) (August, 1910).
United Service Magazine (London) (August, 1910).





THE MUSEUM OF THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES,
GOVERNOR'S ISLAND, NEW YORK HARBOR.

Editor's Bulletin.

Prize
Subjects,
1910.

THE subjects selected for the Gold and Silver Medals, the Seaman and the Reeve Memorial Prizes for the current year are worthy of the attention of both readers of and contributors to the contents of this JOURNAL.

Accessions
to
Library.

The Library has received a valuable collection of bound volumes of *Army Registers* and *General Court-martial Orders* presented by Col. George S. Anderson, General Staff.

Change
of
Address.

Changes of Address of a Member or Associate will only be made upon his order; otherwise the Secretary cannot be held responsible for non-receipt of the JOURNAL.



Journal
of the
Military
Service
Institution
1878
—
1910

Governor's
Island
N. Y. H.

THE JOURNAL

NOVEMBER-DECEMBER, 1910.



OME features of the JOURNAL under consideration for early publication are noted as follows:

- I. "PRACTICAL MILITARY INSTRUCTION."
(An address delivered some time since.)
By Col. George S. Anderson (Cav.), General Staff.
- II. "THE PECULIARITIES OF WAR." By Major James Chester,
U. S. A. (retired).
- III. "ARMY REORGANIZATION." By First Lieut. David L. Roscoe,
1st U. S. Cavalry.
- IV. "THE ARMY OF TURKEY." (Trans.) By Lieut.-Col. R. H.
Wilson, 16th U. S. Infantry.
- V. "THE EMPLOYMENT OF RUSSIAN ARTILLERY IN MAN-
CHURIA." By Lieut.-Gen. Rohne. Translated by Lieut. E. Santschi,
15th Infantry. (Concluded.)
- VI. "A REVIEW OF THE SERVICES OF THE REGULAR
ARMY IN THE CIVIL WAR, '61-'65." The Artillery. By
Major John C. White, U. S. A. (retired). (Concluded.)
- VII. "IDEAS CONCERNING THE EMPLOYMENT OF RAIL-
ROADS IN WAR." (Trans.) By Lieut. Emile V. Cutrer, 11th
Infantry. (Concluded.)
- VIII. "TYPES AND TRADITIONS OF THE OLD ARMY."
"A Cadet Round Robin in 1822." (Facsimile.) With Notes.

THE PUBLICATION COMMITTEE invites contributions of original papers, translations and comments upon current topics. Attention is called to "Gold Medal," "Seaman" and "Reeve" prizes described elsewhere.



MEMORANDUM

THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES is an association of officers of the Army and National Guard for the promotion of the military interests of the United States. Membership entitling to a vote in the control of the INSTITUTION is open to officers of the Army, upon their own application, without ballot. Any commissioned officers of the Organized Militia may become Associate Members by a ballot of the Executive Council upon their own application; all other persons of good repute, including enlisted men of the National Guard, are eligible to Associate Membership, by ballot upon a written application endorsed by a Member or Associate Member of the INSTITUTION.



MEMBERSHIP comprises eligibility to compete for the Gold Medal and other annual prizes of the INSTITUTION; subscription to the bi-monthly JOURNAL; admission to the Museum and the use of books composing the Military Section of the New York Public Library, which, by a pending arrangement and prescribed rules, may be loaned to Members or Associates of the MILITARY SERVICE INSTITUTION only. Annual subscription \$2.50. Life Membership \$50.



THE JOURNAL of the MILITARY SERVICE INSTITUTION is the only bi-monthly magazine in the United States, controlled exclusively by officers of the Army, which is devoted to the interests of all branches of the military service, and is indispensable to the complete professional equipment of military students.

The Military Service Institution.

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THE SECRETARY OF WAR.

THE LIEUTENANT-GENERAL.

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Resident Vice-President.

(Vacancy.)

Secretary and Editor.

BRIG.-GEN. THEO. F. RODENBOUGH, M. H., U. S. A.
Retired.

Treasurer.

COLONEL WILLIAM S. PATTEN, U. S. A.
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Executive Council.

Term ending 1911.

COLONEL JAMES N. ALLISON, SUBSISTENCE DEPARTMENT,
Chief Commissary, Department of the East.

COLONEL HOBART K. BAILEY, TWENTY-NINTH INFANTRY,
Commanding Fort Jay, N. Y.

MAJOR WILLIAM L. KENLY, FIELD ARTILLERY,
Recruiting Officer.

COLONEL ORIN B. MITCHAM, ORDNANCE DEPARTMENT,
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COLONEL SOLOMON W. ROESSLER, CORPS OF ENGINEERS,
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COLONEL HUGH L. SCOTT, U. S. A.
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Term ending 1913.

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COLONEL WILLIAM M. BLACK, CORPS OF ENGINEERS,
Chief Engineer, Department of the East.

BT. BRIG.-GEN. WALTER B. HOTCHKIN, N. G. N. Y.
Colonel Twenty-second Regiment Engineers.

COLONEL ALBERT TODD, COAST ARTILLERY CORPS,
Commanding Fort Totten.

MAJOR CHARLES M. TRUITT, (INF.) ADJT. GEN. DEPT.,
Headquarters, Department of the East.

Term ending 1915.

COLONEL GEORGE S. ANDERSON, (CAV.) GENERAL STAFF
Chief of Staff, Department of the East.

COLONEL JOHN VAN R. HOFF, M. C.,
Chief Surgeon, Dept. of the East.

MAJOR ARTHUR H. MACKIE, N. G. N. J.,
First Regiment Infantry.

CAPTAIN PETER E. TRAUB, TWELFTH CAVALRY,
United States Military Academy.

Honorary Advisory Council.

MAJOR CHARLES E. LYDECKER,
Late National Guard, N. Y.

Corresponding Member of Council for the Philippines.

COLONEL H. O. S. HEISTAND, ADJT. GEN. DEPT.,
Adjutant General Philippines Division.

MEMBERSHIP AND DUES.

Membership dates from the first day of the calendar year in which the "application" is made, unless such application is made after October 1st, when the membership dates from the first day of the next calendar year.

Initiation fee and dues for first year \$2.50; the same amount annually for five years subsequently. After that two dollars per year. This includes the Journal. Life membership \$50.



Gold Medal—1910.

First Prize—Gold Medal, \$100 and Life Membership.*

Second Prize—Silver Medal, Honorable Mention and \$50.*

I.—The following is published for all concerned:

Resolved, That a Prize of a Gold Medal, together with \$100 and a Certificate of Life Membership, be offered annually by THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES for the best essay on a military topic of current interest, the subject to be selected by the Executive Council, and a Silver Medal and \$50 to the first honorably mentioned essay. Should either prize be awarded more than once to the same person, then for each award after the first, a *Clasp* shall be awarded in place of the medal.*

1. *Competition to be open to Members and Associate Members only.*

2. Each competitor shall send three copies of his essay in a sealed envelope to reach the Secretary *on or before January 1, 1911*. The essay must be strictly anonymous, but the author shall adopt some *nom de plume* and sign the same to the essay, followed by a figure corresponding with the number of pages of MS.; a sealed envelope bearing the *nom de plume* on the outside and enclosing full name and address, should accompany the essay. This envelope to be opened in the presence of the Council after the decision of the Board of Award has been received.

3. The prize shall be awarded upon the recommendation of a Board consisting of three suitable persons chosen by the Executive Council, who will be requested to designate *the essay deemed worthy of the prize*; and also in their order of merit those deserving of honorable mention.

In determining the essay worthy of the prize, the Board will be requested to consider its professional excellence, usefulness and valuable originality, as of the first importance, and its literary merit as of the second importance. Should members of the Board determine that no essay is worthy of the prize, they may designate one or more essays simply as of honorable mention; in either case, they will be requested to designate one essay as first honorable mention. Should the Board deem proper, it may recommend neither prize nor honorable mention. Should it be so desired, the recommendation of individual members will be considered as confidential by the Council.

It is suggested that the members of the Board of Award consider it a part of their duty to invite attention to phrases of an otherwise acceptable paper which, in their judgment, serve to weaken the effect of the argument of the writer.

4. The successful essay shall be published in the Journal of the Institution, and the essays deemed worthy of honorable mention shall be read before the Institution, or published, at the discretion of the Council, which reserves the right to publish any other essay submitted for a prize, omitting marks of competition.

5. Essays must not exceed ten thousand words, or twenty-five pages of the size and style of the JOURNAL (exclusive of tables), nor contain less than five thousand words.

*Separate subjects for 1910 see following pages

Annual Prizes.

Gold Medal Prize, 1910.

GOLD MEDAL, \$100, AND LIFE MEMBERSHIP

FOR THE BEST ESSAY ON

"What measures should be adopted for effective prevention of unsanitary conditions in the early stages of volunteer camps in time of war?"

Board of Award:

Brig.-Gen. W. M. GRAHAM, U. S. A. (Retired).

Lieut.-Col. J. R. KEAN, Medical Corps.

Lieut.-Col. D. D. GAILLARD, Corps of Engineers.

Silver Medal Prize, 1910.

SILVER MEDAL, \$50, AND HONORABLE MENTION

FOR THE BEST ESSAY ON

"How far, in time of peace, should the authority of the United States be further extended over the organized militia of the various states and territories?"

Board of Award:

Brig.-Gen. T. J. STEWART, Adjutant-General, Pa.

Bt. Brig.-Gen. W. B. HOTCHKIN, N. G., N. Y.

Lieut.-Col. S. E. SMILEY, Adjutant-General, D. C. M.

For rules governing the competitions, see "Rules for Gold Medal, 1910," page 326.

Annual Prizes.

THE SEAMAN PRIZE, 1910.

(Founded by Major L. L. Seaman, M.D., LL.D., late Surgeon, U. S. V.)

ONE HUNDRED DOLLARS.

For best essays on subjects selected by Major Seaman and approved by Council; competition open to all officers and ex-officers of Army, Navy, Marine Corps, Marine Hospital Service, Volunteers or National Guard; in other respects same as Gold Medal prize except that essays are limited to 15,000 words, and are due December 1.

Subject:—"How can auto-intoxication*, that rarely recognized disease, which has directly or indirectly caused more invalidism and mortality in the United States Army than all other pathogenic causes combined, be prevented?"

NOTE—The above subject is worded exactly as written by Dr. Seaman. While the Council of the MILITARY SERVICE INSTITUTION is not prepared to indorse or deny the opinion of Dr. Seaman, the importance of the eradication of this cause of non-efficiency among our soldiers cannot be insisted upon too emphatically.

Board of Award: WILLIAM M. POLK, M.D., Dean Med. School, Cornell University; Colonel LOUIS M. MAUS, M.C., Chief Surgeon, Department of the Lakes; Lieut.-Colonel WILLIAM H. ARTHUR, M.C., Walter Reed General Hospital, D. C.

THE REEVE MEMORIAL PRIZE, 1910.

(In Memory of the late Bvt. Brig.-Gen. I. V. D. Reeve, U.S.A.)

SIXTY DOLLARS AND CERTIFICATE OF AWARD.

To be awarded annually upon the recommendation of a Board of three suitable persons for the best short paper upon a subject of general interest to the Service, selected by the Council. Competition open to the Army, Navy, Marines and National Guard. Papers to be submitted not later than May 1, 1911, and to contain not more than 4500 nor less than 3500 words. Conditions, in other respects, to be the same as for the Gold Medal Prize.

Subject:—"Is the present system of detail to Staff Departments conducive to the discipline and efficiency of the Army? Should it be revised?"

Board of Award:—Brig.-Gen. WILLIAM CROZIER, U. S. A.; Brig.-Gen. TASKER BLISS, U. S. A.; Col. ALFRED C. SHARPE, 23d Infantry.

*Self-poisoning by toxic matters generated within the intestinal canal or other parts of the body.

JOURNAL
OF
THE MILITARY SERVICE INSTITUTION
OF THE
UNITED STATES.

"I cannot help plead to my countrymen, at every opportunity, to cherish all that is manly and noble in the military profession, because Peace is enervating and no man is wise enough to foretell when soldiers may be in demand again."—GENERAL SHERMAN.

Vol. XLVII. NOVEMBER-DECEMBER, 1910. No. CLXVIII.

PRACTICAL MILITARY INSTRUCTION.

BY COLONEL GEORGE S. ANDERSON, NINTH CAVALRY.



THIS essay was hastily prepared and read before a Post Lyceum shortly prior to the beginning of our Cuban Campaign in 1898. When I packed up my belongings on starting for Tampa, my retained copy of the paper was put in a chest, and I did not see it again until a few days ago, when I came across it unexpectedly. On re-reading it I concluded that, although there had been many improvements in the practical education of the army, there was still a wide margin of too much cramming. With this view I presented it for publication just as it was originally written and with all its imperfections.

G. S. A.

APOLOGY.

The subject I have chosen appeals to us all.

No apologies are due to you for this infliction, for the paper is prepared and read "by order of the Secretary of War."

That you will receive it in a quiet, orderly manner is equally assured, and by the same authority; I would not have prepared it had it not been officially required, nor would any of you have voluntarily wasted an hour in listening to it. No order for the compulsory education of men of middle age can be popular. The original order for the Post Lyceum was utterly obnoxious; the recent one is *much less* so, but the best criterion of its unpopularity is the fact that each and every one of you who has reached

that intellectual "change of life" that comes at the fiftieth birthday has claimed immunity. As the horoscope now stands, I have only one more intellectual spasm to evolve before I reach that happy epoch.

I sympathize with you, in the hope that you will all be spared it.

THE ORIGINAL ORDER.

In 1890 a law was passed requiring all officers below the rank of major to be examined before promotion. At first it was hastily enforced, and there was but little method or system in its administration. On October 5, 1891, in G. O. 80, A. G. O., a well-matured plan of examination was adopted, and in paragraph 2 of that order the original Lyceum scheme was promulgated. The shibboleth which has held it up and obscured its true meaning in all of its wanderings has been "*the education of the Line of the Army.*" This has been its pillar of fire and of cloud. The staff has not needed education; their antecedents and manner of appointment forbid such a suggestion.

They are to the line as a second lieutenant's shoulder straps are to those of a colonel—"the same, omitting the eagle." This order made "theoretical instruction" and "systematic recitations" imperative. Every officer not disqualified by age, or contact with the staff, was obliged to prepare a written essay on some subject assigned to him by his commanding officer and approved by the department commander. His preferences were to be consulted, however, due regard being had "to his capacity." This dose was to be administered to every *line* officer for "*not less than six months*" of each year. If he survived it (and did not reach his fiftieth birthday or could not get any kind of detached service), he, like Jacob, was entitled "to another chance."

The avowed object of all this was to enable us to pass our examinations for promotion. In this it has been most successful. It has been in operation near seven years, during which time at least seven hundred line officers have been promoted, and not more than two have failed mentally. It was arranged and promulgated with that sweet reasonableness that shut out no one who had friends or whom it was at all desirable to promote. So far it was good—perhaps—but for my part I had rather enjoy a little more liberal prospect on my seniors, and I've no doubt every junior has the same feeling towards me; I don't think much of him if he hasn't.

But the absurdity of it all; to bring the officers of the garrison together in solemn conclave; to ask them questions out of some book; or send them to a sideboard with a problem; to have old gray-beard stand mute, while Johnny-come-lately could rattle it all off without missing a comma; this was too much; it was humiliating, and it did no one any good. It is safe to say that nearly all of us read a great deal; probably most of us read too much. Many of us are studious; but we are all too old to have wisdom crammed down our throats like food down the necks of Strasbourg geese. Any man who desires to study for his examination can do it better in the quiet of his room, where there are no blares of trumpets or beating of drums, and where he is beyond the ken of the pale censor of the staff with his criticisms. He can cover more subjects in a given time, and he can cover them more thoroughly than under the original Lyceum system—or any other.

THE LATE LYCEUM ORDER.

Yes, the late order—G. O. 50 of 1897—is surely less obnoxious. It abandons the recitation feature, which was far the worst part of the old system. The free discussion of professional and current topics of interest is valuable; such an interchange of thoughts and ideas is apt to benefit us—if we remain awake. It definitely recognizes the good that comes from association and converse with our fellow man. The chimpanzee in the tree top knows a good deal more about harvesting the cocoanut than we could teach him. A celebrated philosopher, after a half-hour's struggle to put a collar on a horse, was told by the housemaid to "put it on upside down and then turn it"—we can all learn daily, hourly, constantly, by observation and contact with the world, and this knowledge is good for us and will remain with us. But "the essay" we have with us still. What are its objects? To make literary artists of us? I have heard a good many essays read; I don't think I ever heard one of first-class literary style. I don't believe that practice has ever benefitted anyone in this respect. I am not conscious that I have ever heard any original idea expressed in a paper; I have heard many things that *were* new to me, but I could better have found them out by more practical means, and they would thus have created a more lasting impression.

There is one other object of the essay, and that is to force a man to study carefully some given subject. To this I object

that if it is not voluntary it will not be well done; and if voluntary, that task or some other equally valuable to him would have occupied his time. A scrutiny of the list of subjects of essays published in the military papers for the last six years shows that as a rule older officers write of their experiences; this is personal history, sometimes valuable and often interesting. But it is *more* valuable, *more* complete and *more* interesting when informally narrated. On the other hand, the younger officers treat us to chunks of strategy—how to organize large armies; how to surprise and capture the enemy; this, it is my observation, is quite as clearly and well expressed in books to which *I* have access, and I had rather get it at first hand from them; but they (the juniors) are usually forced to take up these subjects because their experience does not furnish them any others. This is a defect that time usually corrects, but my contention is that the correction goes on too slowly. Too many of us are engaged in giving rules for the organizing and handling of armies of millions, and too few of us concerned with the plain and simple practical affairs of our daily lives.

ARGUMENT.

I yield to no man in my appreciation of education, knowledge, culture, and all that these words mean; but I do not believe that they can be attained by compulsory methods, or by recitation from a book. There must be an inborn tendency—a feeling of necessity for knowledge—before it can be stored away. We all recognize the man who “knows it all,” and is always ready to impart it; the man who will teach German politics to Bismarck; science to Huxley; or a coyote how to find his way back to his hole; my remarks have no reference to him.

RETROSPECT.

But I wish to go over with you the list of epidemics of wisdom that we have gone through in the last twenty-six years, and we *may* from it draw a lesson.

When I first joined my troop I was promptly made Post Signal officer—among other honors. For about two years I had signalling all of the time—wand, flag, torch, heliograph and telegraph; night and day, winter and summer, one eternal grind.

I was proficient in the code and could use it in any way, on any instrument. To-day I *hardly* remember half the letters, and would be pronounced deficient by any board. Signalling was the

disease of the day, and when it had run its course it died and was buried. All the later tendencies in that line have been towards moderation and sense. Now it is not thought necessary to instruct all of your men all of the time; but a few men for a short season. That is well and proper; a troop should always have a few men fairly instructed—the serious business to be attended to by men who enlisted for that purpose, in the signal corps, and who have nothing else to do or to think of. About two years later the map-making bacillus became active. If one went across his front yard, or his back yard, he had to submit a map. If he went by day or by night, alone or with assistants, over new country or by the side of a railroad, or over a road that had been known and traveled for years by daily coaches, there was no let up, no reason, no excuse. The map must come. And that is why the old maps, issued from department headquarters, are so unreliable; the men who made them invented them upon their return to the Post, and fitted them as well as possible to their reports. That *craze* also died, and now we find the map-making done by a few who are known to be efficient, and their work is good.

Next came the target craze; every man to shoot every day and all the time. But we all know how this incubus has been whittled down of late years.

Then we had the education mania; it seems that it too is adjusting itself to reason, and we *hope*—but for the record of the past we should *doubt*. A man who is twenty-five and wants to go to school may be benefitted; but if he *don't* want to go, it is far better to leave him at home. All the learned professions hold annual conventions at which are read valuable professional papers; but if these were prepared “by order” they would be valueless, and the professions would become the laughing stock of the world. Our latest disease seems to be the medical profession. All line officers are taught hygiene, pathology, physiology, anatomy and surgery—and I question when materia medica and gynecology will follow.

Law has had its course and now we are in the beginning of its sensible period—the period of decline. In looking over the field of human learning and endeavor we find but one branch neglected, and that must have its turn next—it is theology. If that does not come within the next year and a half, I fear that I shall be able to miss it—and pass to the retired list, but partially educated at last.

And we have had *schools* and SCHOOLS. The military academy and the artillery school date back before my recollection; but since 1871 there have come up, in turn, the signal school at Fort Myer; the infantry and cavalry at Fort Leavenworth, Willet's Point (for the line) and Fort Riley. They are good and should be continued for those that want the education, but not for those who only wish—by attendance at them—to escape the routine duties of their station. We are often told that everyone should have some “hobby”—some fad by which he shall be known and distinguished. Well, I agree with this, but the fad should be our profession, and that part of it which is our daily life, or will soon become so, not the command of an army of millions, or its proper organization. Let us think of our men; their daily wants; how to feed, clothe and care for them; to make them comfortable and contented, in barracks and in the field; stimulate them to reasonable and proper activity; find out their wants and their needs; teach them to care for their horses; to keep themselves dry and warm on campaign; to be happy, cheerful and efficient. This is better than all the learning of all the books. There are no doubt many valuable things to be learned by study and reflection. I take it that at the present day the tendency of all the officers of the army is in that direction. We have all ruined our eyes by a constant tension at the short focus of a book, while our Indian antagonist still can see the battle from afar.

If I were given a choice as to the assignment of a lieutenant to my troop, I had much rather take one who was ready and anxious for field service all the time, one who spent six days of each week in hunting or fishing, than one who spent all of his time in study, whose head was crammed with the sum of human knowledge and who had the intellect of Voltaire.

Do we not know men who can repeat, page by page, all the books of the learned Leavenworth lieutenants, and yet who are helpless on the drill-ground under the most ordinary situations?

Quick decision, rapidity of movement, and accuracy of calculation are the essentials, and these are worth more than all the learning their heads can hold.

Our great authors of war literature, prior to the past decade, were Jomini, Hamley and Halleck. Not one of these ever won a battle. They were coldly logical in the study, but helpless on the field in the presence of conditions as they *did* exist, which were so different from the way they had planned them.

Wellington said that "Waterloo was won on the playgrounds of Eton and Harrow." The pluck, endurance, alertness and bravery displayed on the football fields last fall would suggest the members of these teams as the ones first to be called upon in case our country needed officers. They would *command* and *lead* and their men would follow. I had far rather command men who had not learned the German way of being killed in scientific battle, but who, like the Greeks at Thermopyla, or General Jackson's men at New Orleans, died when and where their officers pleased.

The staff of our army has dictated that the line, *and the line only*, is in need of education.

The object most carefully considered by all ruling powers is how to utilize for purposes of war all the manhood and resources of the nation; how to be perfectly prepared on shortest notice. This the duty and function of the general staff. For this object study and education are necessary, and they are the ones who should be arrayed twice each week on the benches of the school room and be made to "say their lessons."

We have grasped the shadow of German methods, but our staff got hold of it first, and they have thrust its corroding substance upon the line, while the staff has remained an amused spectator.

What we should teach our men are the lowly virtues, not arithmetic and science. Lord Wolseley has said that "fearlessness, daring, endurance, contempt of death, self-sacrifice, readiness to die for country or some other cause," all these are virtues which have often saved nations when at their last gasp. And I will assert that they are not learned from the schoolmaster at the blackboard, nor with a table of logarithms. We should teach them to be honest, truthful, brave, tidy and punctual, to respect authority and the government that provides for them.

I maintain that every man that leaves my troop with character "*Good*" after three or five years' honest and faithful service is a better man than he would have been had he spent these years at a seat of learning; he is better able to care for himself; a better man; a better citizen. I quote again from Lord Wolseley. He says: "We have numberless examples in history of nations steeped in literature and learned in the schools of philosophy which were destroyed, almost exterminated, by hordes of barbarians who knew nothing of letters, and who thought the best thing to do with a library was to burn it."

The virility of the men will be the winning card in the short, sharp, decisive wars of the future. Without active, acute, virile officers the energy of the men will be thrown away or wasted. The officer who burns the midnight oil on the eve of battle studying *from the books* how to meet emergencies that may not—probably will not—arise, and then loses fifteen minutes of valuable time in the morning, is holding the bag for the other man's snipes.

Look at China! Her struggle for learning is now shared by all classes, and it has created a contempt for the hardy, active, fighting man, and with her great wealth and immense hordes she was overthrown in one short campaign by the few small isles of Japan.

The possibilities of any arm of the service cannot be learned from books; they must be ground into one by close observation—by the individual training of every man. We should know our men well—where they came from; what their character; of what capable—then we will know what we may expect. This cannot be found out during a college detail, or one on the staff of the governor of a State.

It is difficult to overestimate the moral advantage that would accrue to the side that won the first important engagement in a war, and I will wager that the commander of that force will be a man of action and not a man of books and theories. Enter the battle with the thought that you are invincible and the thought will largely influence the fact. The wisest plans are useless unless executed with energy and vigor and forced to a successful issue. The execution of a wise plan is far more difficult than its conception.

But it may be said that a commander should be both a learned man and a man of action. This were most desirable, but history shows very few such, and they were *born*, not *made*. Napoleon was eminently a man of action, and personally looked after the most trifling detail of every campaign. When he became old, fat and inert he lost Waterloo and the throne of France.

The conditions that influence the result of a war are too numerous and uncertain to be made the subjects of text-book calculations; wind, rain, snow, condition of roads; nature of soil; morale of troops; their degree of fatigue—these all affect the calculated results to an unknown degree.

The breaking strain of a line of troops will depend more

upon its morale than upon the number of casualties, and its morale will come entirely from its subordinate commanders. Nervous energy will give out, and then comes the effect of sound bodies, held by sound discipline. They will believe there is no difficulty that they cannot overcome.

My contention is that the whole system of our education is wrong, faulty, wasteful, and a humbug. There is too much of an effort to "constipate our minds with undigested learning." There seems to be a desire to hasten the millennium by the superior education of us all. It is easy to know every rule of strategy and war and yet not win battles, as it is easy to know the shorter Catechism, the Creed, the Lord's Prayer and the Ten Commandments and yet not be saved. There come times when none of these good guides seem to fit.

Of course we should read, study and know what is going on, but this we all do without having it forced upon us. Our studies should fit our rank and position and not aim to teach how to organize and equip, control and maneuver armies of millions. The severe lessons of our late Indian campaigns are worth far more to us than all the campaigns of Napoleon or Moltke.

As suiting my purpose, I'll make several quotations from a lecture on the "Professional Study of Military History," printed in the November (1897) number of the MILITARY SERVICE INSTITUTION JOURNAL:*

"One purpose is the increase of the *personal* efficiency, the making the soldier a better soldier, the enabling him to do better the work which lies before him to-day and to-morrow. But since soldiers are of all ranks and of all ages, the work before them is not the same for all. The general in utilizing the experiences will need some of one class; a subaltern those of another; some which are simple and clear to the old soldier are Hebrew to the young one."

"A mere bold catalogue of distances is remembered for examination purposes only, like the arithmetic tables."

"His elder brother had told him that he was learning how great generals had handled armies, and that the principles they followed were called by a very big name, 'the eternal principles of strategy,' and that he was about to buy a thick quarto book in a red cover (Hamley) to learn what they were."

"They are of value to you as practical soldiers, for increas-

*Reprint from *Journal R. U. S. I.*

ing your worth and power as practical soldiers, and for enabling you to do your duty in the field."

And much more there is in this valuable and interesting paper that I would like to quote, but time forbids.

Let us not overshoot our mark; let us "stick to our lasts;" it is the true secret of any business. Why do we want to be taught a little of everything under the sun? It will make us poor in everything. The sum of human knowledge is now too great for any man to have even a moderate acquaintance with more than a single branch of it. Our branch is the command of troops, and those only in small bodies; let us stick to that.

I had three cousins in the grocery business in New York City, and they all made comfortable fortunes, but they did not call their clerks to recitations and require them to know how eggs were made or butter was laid. Their business was to know how to deal them out, and whom they could or could not trust.

There seems to be with many a widespread tendency or craze to be talked about; to live in the glare of public opinion by voice and by portrait. All this tends to destroy earnestness, originality and genuine power, which is always solitary. Much of our recent military literature that we are required to study gives us "that tired feeling," which is a sure sign that it has overshot the mark.

The poorest use on earth to which an intelligent lieutenant can be put is to have him go on as officer of the guard once a week during his service as a lieutenant and be eaten by the guard-house bedbugs. In our army he will have to serve from fifteen to thirty years, or even more, as a lieutenant, and if he has not learned all there is to learn of guard duty after three or four tours, he had better seek other fields of endeavor and usefulness; he is not fit for military life.

Not long since I had a conversation with the man who, perhaps more than any other, was responsible for the original Lyceum order of 1891. He seemed astonished when I expressed much the views that I have here written down. I went further in the matter of the value of out-of-door, free, independent life for men and officers.

I told him that I thought that lieutenants on first joining ought to be *made* to go out and hunt, study nature, learn to sleep on the ground, be practical even if they did not see the inside of a book for years. He said "Yes; but can you make them do it?" I replied, "No; you can't make anybody do any-

thing satisfactorily *if he don't want to*, but he will take more kindly to my medicine than to yours and make less of a face over it." It surely will do him more good; and then if it should have the probable reward of preferment, promotion, soft details and glory, there will be a bonfire of books and a purchase of shot-guns all along the line. No man can perfect himself in both theory and practice at the same time; with us let the practice come first; the man who learns wing shooting solely from the book will have an empty game bag. It may be asked how it was that we completely subdued the Indians, when they were so superior to us in practical things. It is a most simple matter; our recruitment was constant and came from the whole inhabitants of the land, while theirs was suspended during hostilities, and they had but a small tribe to draw from. In spite of all our news bureaus and glowing reports, they ever beat us two to one.

It is time we called a halt in this cramming process, before we merit the reproach of Festus to Paul, "Much learning doth make thee mad."

It is a sorrowful contemplation that many of us have passed the age at which either practice or theory can be of much service; history shows that we arrive at this state before we reach the exemption epoch, fifty years.

Napoleon was not fifty-two when he died; the great men of our late war were all young; their ages on the breaking out of the war were:

Grant, 39	Ewell, 44	Hill, D. H., 41
McClellan, 34	Sherman, 41	Sheridan, 31
Thomas, 45	McPherson, 32	Halleck, 46
Canby, 43	Meade, 45	Rosecrans, 42
Hancock, 37	Buell, 43	McDowell, 42
Sedgwick, 47	Schofield, 29	Ord, 43
Lee, 55	Hooker, 45	Johnston, 54
Early, 44	Beauregard, 43	Jackson, 38
Longstreet, 40	Van Dorn, 40	Hood, 30
Hill, A. P., 36	Stuart, 28	

In all this long list Lee and Johnston are the only ones as old as I am to-day, and most of them had the advantage of actual service in the war with Mexico. We ancient officers of low rank are simply "military vegetables, without ambition as without hope." What have we to profit by learning, or how will it improve us?

Compulsory education and the *doctor's* part in war (anatomy, surgery, hygiene and first aid) are now our hobbies; these

will die and many of us will rejoice at the burial of their remains. But some other craze will occupy the field. It would seem that we ought to enter upon the solution of it in a rational way, but all history shows that we will not. Whatever it may be it will hold the boards for a few years before it descends into the grave in the condition of Lazarus after four days' postponed burial. In the meantime essays will be written upon it, without sense, reason, originality or excuse for being. Books will be written that may bring promotions, honors, and general contempt. But long essays, like this, and ponderous volumes are no surer evidence of learning or ability than the odor of musk is evidence of harlotry. The immortal author of that military classic, the "Peninsular War," closes his history with these words, which will fittingly close my paper, "Fortune, however, always asserts her supremacy in war, and often from a slight mistake such disastrous consequences flow that in every age and in every nation the uncertainty of arms has been proverbial.

"War is the condition of this world.

"From man to the smallest insect, all are at strife; and the glory of arms, which cannot be obtained without the exercise of honor, fortitude, courage, obedience, modesty and temperance (there is no word here about book learning) excites the brave man's patriotism, and is a chastening correction for the rich man's pride. It is yet no security for power. Napoleon, the greatest man of whom history makes mention; Napoleon, the most wonderful commander, the most sagacious politician, the most profound statesman, lost by arms Portugal, Germany, Italy, Poland, Spain, and France. Fortune, that name for the unknown combinations of Infinite power, was wanting to him, and without her aid, the designs of man are as bubbles on a troubled ocean."

Let us not *know* too much, but do more; let what we do fit our present and prospective spheres; we will thereby more surely force fortune to perch upon our banners.



A PLAN FOR PROMOTION IN THE ARMY.

BY LIEUTENANT DAVID L. ROSCOE, FIRST CAVALRY.



THE wonderful progress made in recent years in military science and the keen competition now existing between the nations of the earth in commerce and therefore in matters military, demand that our efforts to attain the goal of military efficiency shall be redoubled, to the end that we, as a first-class power, may keep pace with those nations with whom there may be ever so slight a chance of future entanglements.

That we, one of the mighty nations of the earth, with our untold wealth of resources, should be in the least unprepared to defend our wealth and our institutions or indeed to maintain our integrity as a nation, seems both niggardly and shortsighted. Whatever may be the merits of Homer Lee's book, it is to the "Valor of Ignorance" that we must ascribe our military unpreparedness and only an active and vigorous campaign of education can dispel that ignorance.

No wiser policy could be adopted than to furnish every public school, academy and university in the United States with a copy of the speech of the Hon. James McLachlan, of California (delivered in the House of Representatives on May 19, 1910), together with the forthcoming report of the Secretary of War, in order that the knowledge therein contained may be taught and our citizens throughout the land may know for themselves wherein we are weak and wherein lies our strength.

Lamentations are heard on every side and untoward conditions are decried throughout the service, yet comparatively little is being done to meet existing conditions in ways that are calculated to produce the best possible results.

In order to overcome the numerical inferiority of our army as well as we may, we must strive for superiority in all those things that make for military efficiency: organization, discipline, equipment and personnel. Granting this, selection and elimination are as necessary in the attainment of superiority in personnel as in the attainment of superiority in equipment or as in the successful organization of a steel trust or an oil syndicate.

Our discipline is good and re-organization schemes are being thought out by the best brains of the army. Boards have

been constituted for the purpose of improving our cavalry and infantry equipment and bringing them up to the standard required by present conditions, yet no wise, feasible and just scheme has been proposed by which we may properly co-ordinate our material, putting the right men in the right places and by which all material not coming up to the standard of excellence may be eliminated.

The principle of selection and elimination as regards the personnel of the army has been recognized as necessary by the thinking men of the army and those in Congress, and in some form or other, soon or late, we shall have it. We will have it because the necessity for it exists. It is up to the army. If we do not evolve some sane scheme promptly we must abide by the consequences and accept some such scheme as that proposed by a high official in the service. This much is certain: If we are to excel in personnel, we must select, cull out and eliminate the wheat from the chaff. Now for a just, feasible, sane and efficacious method. This problem confronts us beyond doubt; let us meet it and solve it.

The principal factors in the problem before us are:

1. The prevention of the selection and promotion of political favorites to the grade of brigadier-general.
2. Equal promotion in the various arms of the service.
3. The elimination of drones.
4. *Partial selection*, by which the best officers may be *gradually* promoted and rewarded without the aid of political influence.
5. The prevention of premature promotions in the lower grades.
6. The prevention of dotage or dry rot.
7. The fair and just treatment of ex-volunteers and others who are too old to properly perform the duties of their rank.
8. The formation of a healthy nucleus for a second line of defense.
9. The temporary assignment of officers to other arms of the service than their own for instruction.
10. The release of officers on the active list from details requiring them to be absent from their legitimate work where their services are most needed.
11. The selection of general officers, except in time of war, from colonels of the line.

Of the numerous causes that unfit officers for command and responsibility the following may be considered the most potent, viz.:

- a. Moral unfitness.
- b. Physical unfitness.
- c. Professional unfitness and lack of aptitude.
- d. Dotage: those who remain too long in a grade.
- e. Inexperience: Those who do not remain long enough in a grade.

As a remedy for moral unfitness, we already have the court-martial, the findings and sentences of which, if properly adhered to by reviewing authorities, would be sufficiently efficacious. It should be a general rule that clemency should not be shown unless recommended by the majority of the court, and the President's power to pardon should be exercised only for cogent reasons stated in the order promulgating the pardon.

As a remedy for physical unfitness we have the retiring board and the examination board, and for professional unfitness and inaptitude a strict application of the spirit and letter of the law governing the latter would suffice. This also lies in the hands of the President and the authorities of the War Department, but favor should not be shown except for such extenuating circumstances as may appeal to a majority of the board and be so recommended by it.

Similar routine should be followed where officers are found physically or professionally unfit by properly constituted boards and who fail to recommend clemency. In no case should an officer who has been dismissed be re-instated in the service unless acquitted by a court, reconvened for proper cause, of the charge or charges that lead to his dismissal; but since all this interferes with the President's constitutional rights to pardon, etc., only vigorous disapproval by the army and by the public will put a permanent stop to such customs.

Dotage: This evil should be met by legislation providing that all those officers who fail to attain stated grades before reaching specified ages shall be retired; and in justice to those whom this law would affect, namely, the older officers who came into the service from the volunteers and who faithfully served their country through the Spanish-American, Philippine and Boxer wars, sacrificing their professions, their business interests and in far too many cases their health that they might answer their country's call, they should be retired with advanced rank, on

three-fourths of their pay and allowances, the day they reach the age limit. These officers would naturally affiliate with the militia of the several States, and in the event of war would provide a strong and healthy nucleus for a second line of defense. In most cases they would answer all the requirements of college and other details requiring the services of experienced officers and honorable men, thus relieving, to a great extent, the regular army of that burden.

Inexperience: In time of peace, all line officers of all grades, from that of second lieutenant to that of lieutenant-colonel, inclusive, should be required to serve a specified *minimum* number of years in *each grade*, and where vacancies occur in the next higher grade, which would under our present system entitle to promotion, they should retain their junior rank until the specified minimum period had been spent in that grade. This would not interfere with their assignment to such duties within their own regiment as the exigencies of the service may require. It would maintain, in a measure, that equality of rank in the various arms of the service which is so much desired and which has, thus far, presented a perplexing problem.

This requirement of a specified minimum number of years in a grade would also prevent the much-feared abuse of a law permitting selection, for most political influence, however strong, is temporary and the reign of high ranking officers of organizations is brief, so a single officer would hardly be likely to be advanced more than a grade or two by political influence or personal preference, while an exceptionally progressive and efficient one would have something to strive for, for he would have every opportunity to advance through his own industry and merit. What *could* be fairer than that? What could so stimulate the army and what would so make for efficiency?

Now, in order to equalize promotion in the various arms and corps, which is all-important to discipline, because it is just and necessary in order to produce cohesion and *esprit de corps*, there should also be a *maximum* number of years during which an officer should serve in a single grade, *i.e.*, officers not eliminated for age or other cause should, after a fixed number of years in a grade, be promoted to the next higher grade and such surplus officers as are thus created should be temporarily attached to other arms of the service than their own for instruction in the details and the powers and limitations of such arm. Engineer officers and officers of the medical corps are promoted

to the grade of captain in this way and no complications arise therefrom, nor need there be if line officers were so promoted for the numerous details requiring the services of officers on the active list—general staff, quartermasters, commissaries, paymasters, etc., etc.; and this system of assigning extra officers to other arms for instruction would more than take care of all the extra officers thus created and would solve the promotion problem for all time, do away with the present inconsistencies and annihilate the petty jealousies and heart burnings which to-day threaten the very foundation of the army as a homogeneous body.

It is desired to lay particular stress upon the advisability of assigning officers to other branches of the service than their own, not only because a thorough knowledge of the powers and limitations and even the little details of all branches of the mobile army are essential to the qualifications of general and staff officers, but because it will tie and cement the services together, and common interests and common sympathy will take the place of conflicting interests and petty jealousies, amounting to-day, in particular cases, to positive hatred.

In computing the number of years that an officer has to his credit in the various grades, all officers on the active list of the army at the passage of this act should receive full credit for all his *actual commissioned service*, volunteer and regular, and be promoted to the grade that he would have attained had he served the maximum number of years, and no more, in each of the intervening grades. His commission in the new grade should bear the date on which he would have reached that grade had this law been in force throughout his entire service. This bill should particularly specify whether or not any back pay should be entailed by its passage.

The above solution would, at first glance, seem difficult and complicated; but a little thought will convince one that it is feasible, just to all classes and all branches of the service, and what should count for more than anything else, it would make for efficiency of the highest order at a minimum cost to the Government. While it would promote those who have been long in the service without proper remuneration, it would prevent the spectacle of graduates of a year or so ago jumping over the heads of their brother officers in other arms before they have even had an opportunity to command a squad or to do a tour as officer of the guard. Instead of the members of the class of

1902 being twenty years behind those volunteers who came into the service in 1901, they would, under this bill, receive credit for but four years less, at the most, than the senior ex-volunteer. In a word, this bill means equal reward and equal opportunity for all.

The following minimum and maximum number of years in grades is suggested:

	MINIMUM	MAXIMUM
Second Lieutenant	3 years	5 years
First Lieutenant	3 “	5 “
Captain	5 “	12 “
Major	5 “	10 “
Lieutenant-Colonel	4 “	8 “
	—	—
Total	20 “	40 “

Thus an officer graduating at the average age, say twenty-four, could not reach the grade of colonel or brigadier-general until he is at least forty-four years old, and all those officers serving the maximum number of years in all the grades would be retired before reaching a colonelcy; therefore efficiency, as well as longevity, would be one of the requisites of a regimental commander.

Officers should be retired for age in grade as follows:

Second Lieutenant	29 years
First Lieutenant	34 “
Captain	46 “
Major	56 “
Lieutenant-Colonel	60 “

In other words, an officer should be a first lieutenant at 29, a captain at 34, a major at 46, a lieutenant-colonel at 56 and a colonel at 60, or, be retired.

Owing to the present congestion in the army this bill would retire many and promote many of those who have been long in the service, yet it would hold in check much premature promotion and do justice to all. It would, in future years, work smoothly and equitably and in less than a decade we would have an efficient and a sufficient army.

It is too much to expect that all the provisions of this bill would suit each and every individual, for, unfortunately, what is to the interest of some is to the detriment of the service; yet it is believed that a bill drafted along similar lines to these would be a veritable life-line to the nation and to the army. Heave ho, Army!

CAMP SEQUOIA, CAL.,

July 4, 1910.



THE TACTICAL EMPLOYMENT OF MACHINE GUNS.*



MACHINE gun detachments, as it were, are, in a given position, equal to a quick-moving mass of infantry, and are capable, in a cramped, narrow position, of opening up a fierce infantry fire. Even if there is no complete cover for one platoon of infantry in a given position, still a whole machine gun detachment may be well covered; the foregoing characteristics have brought forth the rules for the use of the various kinds of machine guns.

The 1904 German Machine Gun Drill Regulations fully comprehend the disposition of machine guns and the tactical rules for their use. The Drill Regulations of other countries are, for the most part, based on these and make use of their principles; but the experience of the recent war (Russo-Japanese) made necessary more or less supplementary changes; however, as regards machine gun investigation, Germany was the pioneer, and as such must be looked up to. Other countries' Drill Regulations (machine gun) have on one hand been influenced by the geographical condition of that country, and have developed special kinds of principles (Switzerland, for instance); or, the experience gained in the wars of these countries has resulted more or less in the adoption or rejection of these principles (English Colonial Wars, for instance). However, the Russo-Japanese War was the first collision in which both civilized parties were equipped in European style. Before the close of this war, on account of the numberless machine guns in use, experience caused special changes in regard to the opinions of machine guns, and the military authorities of every country, in view of these new experiences, changed the organization of machine gun detachments, and are now fully occupied in the investigation of the changes in principle of the tactical use of machine guns.

At the present time machine guns are used: *a*, to represent fire where slow-marching infantry cannot debouch; or, *b*, if so, it cannot debouch at the proper time; or, *c*, it is attached to a cavalry division, or to divisional cavalry, or to the cavalry protecting a march; or, *d*, it is entrusted with the protection of the

*Translated from the *Heiji Zashi* (Japanese).

field artillery; or, *e*, it is employed where it is desired, or is necessary to economize military forces; or, *f*, it is employed in the protection of a defile or in flanking a ditch; and *g*, at every step in the progress of the battle it is used to supplement the infantry fire power.

At this time, the point to be noticed is that machine guns find it difficult to keep up an uninterrupted fire action within the limits of their supply of ammunition. But it must not be forgotten that it is proper to use them as a powerful destroying agent, appearing suddenly, only against a clear, distinct, active target. In view of this, the great fire power of machine guns must be economized until the decisive moment for action.

The principal object of the rules for the use of machine guns is, from a proper position, against a proper target, on a proper occasion, to employ proper fire. Machine guns can never be used as a substitute for the three arms—especially artillery—its duty being no more than that of an auxiliary arm which aids the main force. It is not proper to employ machine guns in the destruction of works, villages, forts, and similar strong places; but they can be employed against weak walls, or in making a breach in a hedge, or in destroying a wooden bridge, or in overthrowing standing trees.

Many machine guns, when compared with infantry rifles having a small barrel, show a decreased initial velocity; but, instead of considering a single shot, importance should be attached to collective fire only, and among machine guns this begins with the operations of men picked for cleverness; and, from the certainty of hits compared with the various mixtures of skill shown in skirmish firing, this more than compensates for the decreased initial velocity.

The most convenient machine guns, the Maxim, Schwartzrose, Hotchkiss, Bergmann, etc., have an average rate of fire of about four hundred (400) shots a minute, therefore a machine gun is very nearly equal in fire power to a platoon of from fifty to sixty men. But it must be considered that a machine gun can be put out of action for a long time by only a single shot, while a skirmish line can continue its fire to the last man.

Machine gun firing, in spite of the opinion of outsiders, is never easy work; it requires great technical training; it is especially difficult amid the shower of bullets of war, when life is at stake, and at the time when the gun layer's mind and spirit are greatly stirred; but under all conditions, machine guns must

be used with the greatest precision. The firing of the same machine gun is not always identical in results; for instance, if the back sights of two guns are set at 1300 meters, and the guns fired at the same target, the scattered shots do not fall on the same surface, the center of impact is different; also, if one gun is compared with another to-day, and the shots fall 50 meters further off to-morrow, the phenomenon of the opposite may be presented.

The efficacy of machine guns, therefore, depends on the thorough firing training of the gunner; in other words, the following requisites must be embraced in perfect training:

1. The gunner must be well trained in handling the gun in every position.

2. The gunner must discover the target quickly.

3. The gunner must estimate the range accurately.

4. The gunner must observe the fire.

There is no question that the above severe requirements can be manifested only by picked soldiers. Therefore the gunners of machine guns properly have in the above requirements good physique, spirit, together with energy, and also must have a specially good eyesight.

For firing training, aiming exercises must be constantly carried out against horizontal, perpendicular and inclined lines of targets; at the same time much ball-firing practice must be carried out. As far as possible machine gun detachments must carry out maneuvers with an unlimited supply of ammunition; while at all times the greatest possible amount of ammunition must be supplied them.

Firing by rotation is to fire about twenty-five shots, cease firing, and observe the effect of the shots; then, if necessary, make the correction for the backsight and the aiming point. It must be noted that firing by rotation is resorted to for the purpose of determining the range; formerly, in the neighborhood of the battles of Atobara and Omdurman, the British often did accurate ranging in clear weather against the close order advance of the tribesmen, at the long range of eighteen hundred meters; the shots, falling in the sand and gravel of the desert, were very easily observed.

It is a principle that fire to be effective must be continuous; any interruption of firing is permissible only when circumstances render it imperative. Machine gun firing should be at one point in a fixed horizontal or vertical direction or should be scattered.

That is to say against an extended target, or against a fixed area, these shots must be scattered.

In the employment of scattered fire by the German machine guns both hands are used, and the gun is swung slowly in a horizontal direction equally towards each flank; and in employing scattered fire in a vertical or an inclined direction, the gun is moved in the horizontal plane by the right hand, and moved slightly in the vertical plane by the right hand. Against a rapidly moving target or against a target in very undulating ground, they employ fire of a wide vertical and horizontal extent.

Generally the machine gun employs a sustained and unhurried fire against an advancing or retreating target; the gunner must follow the target with the gun in the direction in which the target moves. When there is a good chance for observation against a stationary or a moving target, it is profitable, except in cases where laying is omitted, to correct elevation and training by means of impact, so as to quickly adjust the gun.

The longitudinal dispersion of fire of a machine gun is only one-third to one-half that of a skirmish line; therefore the influence of the sun must be carefully considered at the time of fixing the sight; as this is very difficult, it is proper, against a thick target, when observation is not good, to extend the limit and to fire by scattering the shots but little in the vertical direction.

The effect of machine gun fire against a skirmish line, if they skilfully use the terrain, is apt to be very small, especially at a time when impact cannot be fully observed, and at long range a small mistake will cause the expenditure of much ammunition with very little result. Against a wide or deep target, such as an advancing skirmish line, marching columns, cavalry or limbered artillery, we seldom see a result even half effective; this being due to the fact that, if there has been a mistake in setting the back sight, machine guns rely on hitting the mark only by accident. But on the other hand, if they use a proper back sight, they can administer a very severe defeat. A large and dense target, or a skirmish line in plain view, even at long range, is favorable for hits. Since the cone of dispersion of machine guns at long range is far greater than at short range, and since its density of fire is greater than that of a skirmish line, it can be employed with greater certainty of hits.

The German Field Service Regulations, in the articles and clauses on the effect of firearms, say: "The great rate of fire

and the small cone of dispersion of machine guns is such that, if many are assembled in a fixed position, even at long range, they can obtain a very quick as well as a very penetrative result."

At the time when the target becomes partially extinct, if the fire effect is decreased, or if the setting of the back sight is improper, and if the observations are incomplete, depending on the local conditions, the effect may be entirely lost. A straight, close skirmish line, even at 1500 meters, suffers remarkable losses; and against a prone line, when observations are good, good results can be expected up to 1000 meters.

From the results of comparative fire, a skirmish line of about forty men, under favorable conditions, can defeat an *exposed* machine gun; but when the position of the machine gun cannot be clearly seen, the opposite is the case. As regards the size of the area of hits and the rate of fire, Lieutenant-Colonel Baruk compared the battle value of a machine gun detachment, and a detachment line of one hundred men, eighty meters in length; the result shows that a machine gun, against a good target, in a given time made 3600 hits, while the skirmish line in the same time, against a poor target, made only 500 hits. Since the quantity of ammunition for machine guns is limited, for an advantageous result of firing the sights must be set by taking into consideration the effect of the sun and firing must be carried out in a short time, otherwise the advantage will be lost. One point of advantage for machine guns is that under favorable circumstances the impact from rotation firing, compared with the impact of skirmish firing, which is scattered, is easy to observe, and for that reason trial shots are advantageous.

Usually machine guns avoid battle with a well-covered skirmish line, as the results from this extremely useless waste of ammunition are not great.

Infantry engaging in battle with machine guns must, to the greatest extent possible, present a target of irregular height, or such a target as makes it difficult to fire trial shots by rotation. When an infantry detachment receives orders to destroy a machine gun, it must use, from the very first, a great amount of ammunition against this target; usually at a range of 1000 meters, against one machine gun, at least seven hundred shots must be estimated for; indeed, if it is desired to attain such an object, much ammunition must be uselessly sacrificed. As the machine gun line is not usually scattered out, it is better, per-

haps, to destroy each machine gun separately, because when one machine gun is designated for the fire of an entire skirmish line, the gunner of that gun is subjected to fire from the front as well as from an inclined direction, and the close-falling shots make ranging easy. As a rule, even a thin skirmish line, under fire of machine guns, at a range of 1500 meters, cannot advance directly or at a run without receiving heavy losses, it being necessary for the skirmish line to lie down and when moving forward to move in an interrupted line as far as possible (advance by rushes).

A marching column, upon receiving the fire of machine guns, must quickly move to the flank and take advantage of the terrain. A company in column, whether standing or prone, is a good target for a machine gun, and if fired on must form a broken line or get under cover.

Since, at long range, artillery defeats a machine gun, the latter must exhaust every means in its power to keep from being discovered and fired on by artillery. As massed machine gun detachments are easily discovered by artillery, care must be taken to scatter these out so that at long range they seem like platoons extended at large intervals. Whatever may be the conditions of battle, machine guns must not be used separately and alone. When machine guns fight with artillery, the first point to be noted is that they must make use of their great mobility; if possible, they must strive to advance within effective range of the flank of the artillery; for this reason machine gun detachments with pack transport are more useful than the German machine gun detachments with wheeled transport, the former have the same mobility as cavalry. In case the plan from the flanks is an impossibility, the machine guns should be dismounted and taken apart and should be carried in sections as near as possible to the front of the artillery, there set up and go into action. In action, it is not proper to scatter shots all along the front of the artillery, but two machine guns should use one piece of artillery as a target, as a cross fire will give the greatest results.

Since machine guns are a difficult target to hit, to use machine guns against machine guns is to infringe upon the special characteristics of machine guns, and results can be expected only in case of accurate reconnaissance.

In battle against cavalry, the German machine gun detachments would probably be superior to those of other countries,

because in case of an emergency there is no waste of time, as they can fire from the carriage while the horses are still hooked to it. In other countries which use the pack system the gun is packed on a horse while marching, and until they have entered a position they have no self-protective power, and require a special guard. Against cavalry, they must fire on the whole line and then give particular attention to our flanks, and if the guns are dismounted, particular protection must be given to the mounts.

Machine guns in a covered position only make use of a covering detachment; but machine guns themselves are especially suitable as covering detachments for artillery in action; therefore machine guns, in many cases, on account of their special characteristics, must be saved the labor of other arms. Machine gun detachments, at the time of the advance, or at the time of entering a position, if the field of view is difficult, send out mounted scouts on the dangerous flank; these, however, must stop short of losing touch with the machine gun detachment.

It is most necessary to know the plan of the commanding officer of the forces, and the conditions at a given time, to opportunely advance the machine guns; therefore, during the first of the battle, the commanding officer of the machine guns must accompany the commanding officer of the forces, and during the battle must maintain communication with him without any interruption. The commanding officer of the machine guns, at the time that he receives his battle orders from the commanding officer of the forces, does the following:

1. Chooses the firing positions.
2. Measures the ranges.
3. Allots the targets.
4. Decides on the kinds of fire.
5. Orders the commencement of firing.

The firing position must have a free zone of fire up to the shortest possible range; at the time of making this selection, firstly, the principal object of a gun must be to produce the greatest possible effect, and secondly, a gun must concern itself with getting under cover as quickly as possible. Care must be taken to avoid the selection of a position in the neighborhood of a target where the enemy has already fired trial shots; however, it is proper to select a position that has a dark background, and a place where trees, brush, and so forth are thickly growing, so that the enemy may find it difficult to discover our ma-

chine guns. In advancing into a covered position, natural or artificial cover should be used as much as possible, because a sudden fire attack from unexpected quarters is a very effective tactical use of machine guns.

Since shots scatter but little in the direction of depth, when machine guns take a position for firing they may fire over the heads of the troops of their side. It is possible for machine guns to fire over the heads of other troops in a difficult position where infantry cannot do so. Since the ammunition of machine guns is limited in quantity, as a general rule, they must fire at an enemy within the effective fire limit. However, once it is intended to attain the object of the battle, at once the whole of the required ammunition must be used in all parts of the firing line. Frequently changing the target is very bad for effective firing; as far as possible scattered, disorderly firing must be avoided.

As regards the German machine gun organization, we must make a radical distinction between both machine gun companies and machine gun platoons. While, hitherto, the regulations for the employment of machine gun companies have been clearly laid down, on the other hand the machine gun platoons, newly organized October 1, 1907, have been used as an experiment; in the first place, the cause of organizing machine guns into platoons, and investigations as to their tactical employment, was due to the experiences of the Russo-Japanese War. The German machine gun companies in a position of very narrow front are suitable for developing the greatest possible volume of infantry fire and their equipment gives them the same marching power as mounted organizations. If one glances at the Machine Gun Drill Regulations, one will understand that, in the first place, the use of machine guns was principally a matter in the scope of infantry; while its use as a part of the infantry is mentioned several times, its being attached to the independent cavalry in mixed battles has been only very briefly explained. However, the necessity of the use of machine guns attached to the cavalry is gradually being ascertained; and with us, as with the Germans, the attaching of these to cavalry divisions has become a fundamental principle, but lately its use in the scope of infantry combat has rarely been seen. Machine gun companies, attached to cavalry, in mounted or in dismounted combat, without any doubt markedly increase the power of warding off attack; therefore we can state that in the future cavalry must be

equipped with machine guns. Machine guns in the duty of scouting or in the vicinity of villages or defiles are advantageous in crushing the power of resistance of the enemy; on the other hand, in similar terrain, they increase our power of opposition and facilitate the movements of our cavalry.

When cavalry meets cavalry, at the time of the first advance, the machine gun detachment must try to the utmost to quickly advance to a position, first, to cover the deployment of our cavalry, and then to aid it in its attack; on this account the machine gun detachment commander must frequently act of his own initiative. At this time it is quite right to select a firing position in front of the flank of the advancing cavalry, then from this position to continue the fire until immediately before the collision of both lines of cavalry and to prevent the enemy from enveloping the flank that the guns are stationed on. There is no sense in dividing the machine gun detachments into sections, as this increases the firing line uselessly and hampers the movement of the cavalry.

At the time of the advance of the advance guard, the machine guns can compel the enemy to deploy prematurely, and can give the main body time and ground for deployment. Sufficient time can be gained for deployment if the machine guns and the field artillery are pushed forward with the advance guard cavalry, and by taking position at wide intervals, hold the position, and deceive the enemy as to our forces.

Upon the arrival of the infantry, the machine guns withdraw from the firing line, and utilize their mobility to the utmost against other objectives. If against the enemy's flanks, they must act with suddenness and secrecy; hitherto this has been the special duty of cavalry, but from now on the machine gun is the indispensable arm for this purpose, because they can develop fire power equal to that of infantry.

Hitherto in Germany, in infantry combat, machine gun detachments have been employed intact, but under the direct orders of a high ranking commander; this fundamental principle being based on the opinion that machine guns are difficult to put in sustained effect in a long battle; on account of their great weight (one gun requires two men or one horse to pull it), there is an opinion that they are not suitable to accompany infantry when attacking, therefore except when attached to infantry bodies for a special purpose for the most part they form a reserve whose movements are easily controlled by its command-

ing officer. Indeed, drill regulations specify that they shall be used for protection at the time when the enemy extends for attack, and for preparation for the charge. However, this co-operation may perhaps depend on the practicability of firing from a position on high ground in the rear.

In short, the principal function of the machine guns employed is to threaten the flanks and rear of the enemy, and then to dash forward quickly to assist in dangerous places.

Machine gun detachments in an attack upon defensive works must advance to the firing position under cover of night; having reached this position, the work of destruction of obstacles must be facilitated by driving the enemy into his cover. Machine guns in this special sphere are properly attached to advance and rear guards.

At the beginning of the Russo-Japanese War, the Japanese officers universally approved of the opinion stated above. At that time the Japanese attached to the regiments of the independent cavalry brigades four machine gun detachments of six guns each (one company to a regiment), in accordance with the German idea. However, the Japanese cavalry, on account of poor mounts, unskillfulness in cavalry tactics and general weakness, could not put into effect decisive battle action. If the Japanese cavalry had made perfect use of the machine gun in the cavalry fights at the time of the Russian retreat toward Hoten (Mukenden), it is not difficult to imagine how complete would have been the result.

The Russians, in defensive positions, made use of a machine gun company of eight guns, one part being placed on the first line and one part was used to obstruct the enemy's enveloping body, and was placed on the flank. Thus used the effect on the morale and on the flank fire of the assailant was very great. For this reason the Japanese attack, though unparalleled in fierceness, often ended ineffectively. This attack usually stopped when at a very short distance in front of the defender, and it must be attributed to the power of the machine gun that in this position the assailant invariably resorted to a prolonged fire action.

Since the Japanese infantry attack had already used up all its reserves in bearing the fatigue of battle for many days, they were hardly able to ward off the Russian counter attack, and in consequence urged the necessity of attaching machine guns to their infantry.

There is no doubt that the machine guns are an arm useful for maintaining morale, and they can win by their superior fire power in dangerous places; the results are very good if they are used to hold captured positions. For this reason the existing machine gun detachments have been attached to the infantry; and were used without being divided up into smaller detachments; however, some of these machine gun detachments *had a wheeled mount* and in consequence became a good *target for the enemy's artillery* and did not produce the greatest effect. Under actual observation at the time when very many machine guns were used in the same position, the result compared with the number of guns used was ascertained to be small. Since then the general rule has been to divide the machine guns into platoons and to attach them to infantry bodies. It was also ascertained that, on account of their great weight, machine guns could advance with the infantry in attack only with great difficulty. Sometimes, indeed, they had to be taken apart and carried forward to a new position, and there assembled and put in action. Therefore, *as an auxiliary arm for infantry*, a machine gun of *light weight* should be adopted.

After the Shaho fight machine guns were attached to many units; experience relating to the use of these was such that after the Heikotai and Mukden fights both Russians and Japanese markedly increased the number of machine guns and after organization attached them principally to the infantry. One reason for attaching machine guns to the infantry is that much practice is necessary in time of peace that they may make use of it in close co-operation in time of war. All the greater European powers have imitated the above arrangements; in Germany since October 1, 1907, they have been experimenting by organizing machine gun companies and attaching them to infantry regiments. These companies are lightly equipped and are suitable for accompanying the infantry advance to any scene of action; in general, a section being attached to each battalion.

While in the future the machine gun company may be decisively adopted, the old-fashioned machine gun detachment may continue in use, as it is the most suitable for being attached to the cavalry divisions; but they are unsuitable for being attached to the infantry, especially as an easily handled reserve, as it required a great number of draft and riding horses, and presented so great a depth in marching as to be a nearly useless thing in infantry combat; while machine gun companies can be

so handled that any required number of guns can be cut off from the reserve, and the reserve will still possess its required mobility.

The special characteristics of machine guns have not changed with the change of organization; as before, they are:

- a. Long-sustained fire action is not possible.
- b. Against a well-covered skirmish line and against other machine guns their efficacy is small.
- c. They must succor a threatened point.
- d. They must prepare the way for the charge.
- e. They must be used to threaten the enemy's flank and wings.
- f. It is proper to hold machine guns as a reserve for many regiments and battalions, as by depending on these they can markedly increase their fire power.

If a hitch once arises in the advance of the skirmish line, the machine guns are of great value in encouraging them; but the slower they are in taking this part, the better it is, because there is a possibility that, if the machine guns are used too early, and take part in the whole engagement, the supply of ammunition may not prove sufficient; therefore, in view of the probability of exhausting the ammunition, it is not at all proper to employ machine guns in a long-sustained fire action. Machine guns being kept as much as possible under cover, must be used in such urgent duties as obtaining superiority of rifle fire, and in preparation for the charge; as machine guns increase to the greatest possible extent the fire power of the infantry, and their result as regards morale is very great. Therefore, it is a fundamental principle that the machine guns attached to a regiment should usually be left to the discretion of the regimental commander. In such a case the regimental commander, if he deems it necessary, may use this machine gun company as a reserve.

In the future the main reserve will probably be organized with machine guns, and the reserve of each unit may be drawn from this, or it may furnish the enveloping force. However, if the machine guns take part in the engagement from the beginning by making easy the advance of our infantry, the action will end in failure, its execution is not possible, in view of the principles stated above. At long ranges, when our losses are not large, the superior fire power of our artillery can sufficiently aid the advance of our infantry; so there is no reason in using the machine guns too early. It must not be forgotten that at excessively long ranges the material result of machine gun fire is very small; particularly against well-covered infantry that

present a small target. Machine guns cannot develop their efficacy fully excepting those attached to a flank battalion unless they occupy an elevated position.

In case of an attack on a defensive front, which has been fully deployed, the machine guns are usually held in reserve, and afterwards, under control of a superior officer, they are used to threaten the flanks and wings of the enemy. The greater part of the guns of a machine gun company may be used to fiercely cover the advance of our infantry; particularly just before the charge they must overwhelm the enemy's line with their fire.

To attack field artillery in position in defensive works, machine guns must take position, under cover of night, at short range, and must attack at dawn. They are especially necessary in this position to fiercely cover the fire action of the infantry; and it can only thus be possible for machine guns to keep the enemy under his cover, clear away obstacles and advance with the charge. When the point to be charged can be fired upon from a position with a good lookout or from a flank, it is especially advantageous to do so, for then there is no necessity of changing position or of ceasing fire even though the infantry advance and begin their charge. If the defender has some machine guns under cover, it will be necessary to destroy them; but once the charge has been successfully made, the machine guns fire fiercely in pursuit, and advancing to the carried position must help in confirming occupation. On the other hand, if the charge is unsuccessful, and the retreat cannot be avoided, the machine guns must cover the retreating troops. At the time of the pursuit and attack, all the machine guns must advance and, if possible, by firing from a flank position, must ward off the enemy's return fire. It would be almost needless to say that at the time of a retreat, especially if there is no artillery, the machine guns must make the retreat of the infantry as easy as possible. Frequently, in this case the machine guns must be sacrificed; if so, a defile is the most suitable place.

The Switzerland Cavalry Field Service Order gives the following account of the pursuit and attack and the retreat: "The machine guns of cavalry in pursuit and attack have a very great effect; their sudden fierce fire is ruinous, it turns retreat into rout, more particularly so when this fire is on the flank of a large body of troops in retreat. At the time of a retreat the machine guns must quickly occupy a covering position, if possible

on the flanks. By making use of their mobility they can remain longer in this position than the other arms, so as to assist the friendly troops in withdrawing from the engagement. If the retreat be conducted with calmness, time will be gained for making a tough resistance."

At the time when the crisis of the battle draws near, particularly in terrain difficult for mounted troops, the machine guns must take part in the attack. They may be employed by moving them mounted to the enemy's flank and firing on that flank, or may be used to envelop a portion of the enemy that makes a counter attack. In such cases, one must avoid the mistake of inserting a single machine gun in the battle line, or of using them on the flanks of the fighting line; for such employment, by failing to make use of the mobility of the machine guns, is to render useless the special characteristic of machine guns as mounted troops; their mobility is best used by employing them on the flank of the enemy.

Machine guns attached to cavalry increase the battle power and independence of cavalry, as well as markedly encourages cavalry's vigor, initiative and spirit of cavalry daring. Indeed, our cavalry, depending on the aid of machine guns, coolly participates in the battle with the firm self-confidence that, though they meet cavalry of greater skill, they can still destroy them. The cavalry leader, under the necessity of manifest conditions, or to aid a body of troops, when other means fail or are lacking, must not hesitate to sacrifice the machine guns. For machine guns are nothing more than an incomparably good aiding material for the cavalry leader to use in the fulfilling of his duties. However, cavalry that places too much reliance on machine guns loses its value as cavalry.

In defense, machine guns, both detachments and companies, are, in most cases, attached to the reserve, and are employed at the very dangerous points, or in the localities of decisive action; in special cases only are they employed in previously selected positions. In such battles, as in the neighborhood of Mukden, the infantry of the very first line of defense, for a time, can be kept in the rear and its work can be greatly reduced, if the arrangement of the machine guns can be previously discerned, and the necessary cover be provided in case it is lacking; in addition, the fire zone must be cleared as much as possible and the ranges determined. On defense, the especial warning to machine guns is not to open fire too early at long ranges and not to fire too early

at difficult targets where the results will be small. On the other hand, at short range, against a large target, the effect of suddenly opening fire, with many hits, upon the morale of the attacker, cannot be overestimated; precedents are as follows: On January 27, 1905, in the battle in the neighborhood of Heikotai, one Japanese company was deployed in a thin skirmish line and was advancing toward Shauhantai when four Russian machine guns suddenly began firing on them without intermission, and this company was compelled to suspend its attack; on the other hand, in the fight in the neighborhood of Wanchia-wopu, the Japanese had already approached to within short range of the enemy's front, and two masked Russian guns suddenly began a concentrated fire on their attack, and the Japanese, in alarm and confusion, had to suddenly retreat. At Port Arthur and Mukden machine guns were employed to protect barricades, abattis, and wire entanglements, and it was unusual that the attacker destroyed these. It is especially valuable to the defender if his machine guns can be placed in such a position as to flank the front of the main line of defense; machine guns are especially valuable on account of their great mobility in warding off the enveloping movement of the enemy.

In the future the machine gun will probably be an arm indispensable in passing from defensive to offensive action. It is very important to supply ammunition at the proper time so that the full power may be used without interruption. In case of necessity, infantry and cavalry can be used for the duty of supplying ammunition to the machine guns; therefore, even in time of peace, both infantry and cavalry must be thoroughly trained in carrying out this important duty.

In modern battles, machine gun platoons are occasionally separated from each other by some distance, especially in the rare cases where they fight individually; under these circumstances it is difficult to depend on uniform command, but it is good inasmuch as it cultivates highly the power of decision of the platoon commander, the gun commander, and the gunner; however, each must be well furnished with the ability of deciding quickly, as he deems proper, the conditions of battle in his position and within the sphere of his battle duty. To this end, the Machine Gun Drill Regulations speak as follows: "To handle machine guns, one must be very skillful in quickly judging the terrain, in selecting the proper position, in surely estimating the range, or measuring it, and in quickly making out the tar-

get; if this be not so, the result will be such as to reduce the battle effect of machine guns in the same way as that of infantry which does not know battle tactics."

Joint maneuvers with other arms are especially beneficial to machine guns; in these the other arms can investigate, and do away with the difficulty in the use of machine guns.

In our country the method determined upon for the training of the commanding officers of machine gun organizations is for them to take part in the regimental tour of cavalry, then to participate in the scouting maneuvers, together with the cavalry divisions, and then as a final step to frequently take part in the Imperial Maneuvers.

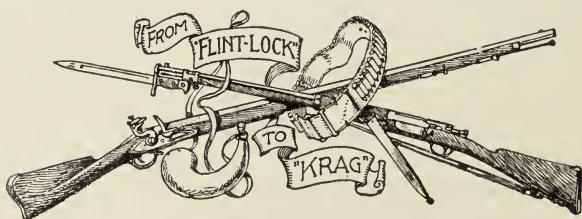
In the future the person who commands machine guns, platoons, or companies, must make use of his opportunities to foster the detailed knowledge of the progress, power, characteristics and systems of use of machine guns. In the future infantry, cavalry and engineers, in many cases in battle, will mutually assist the machine guns and will clearly understand the supplying of ammunition and the effectiveness and mobility of machine guns as a sister arm; and, when necessary, will rely on them, and they must have the ability to replace the personnel of machine gun crews; however, the machine gun commander and the gun pointers are not in this category. It is only when each arm has mutual understanding in time of peace, that when hostilities first break out, they can discover the proper principles of mutual dependence and make the most of them. Machine gun detachments and companies must not only never get out of touch with the organizations to which they are attached, but also they must be diligently used together with these organizations; machine gun detachments must frequently be sent out to maneuver camps, particularly on the occasion of the battalion, regimental and brigade training of the organizations to which they are attached.

In closing, the following notes on the machine guns of the Great Powers are of interest:

The Austro-Hungarian Machine Gun Drill Regulations are largely based on the German Machine Gun Drill Regulations. But the Austro-Hungarian machine gun detachments, both infantry and cavalry, are organized with pack animals, and at each stage of the battle their mobility is greatly used and is described as being of great value. This view must be admitted as proper.

One portion of the English machine gun detachments are organized in accordance with the experience derived from the wars in that country's colonies. The English infantry use machine guns in the same manner as the olden-time infantry battalion artillery; but in the cavalry the opposite is the case and they use machine guns attached to each brigade or division. Our opinion to the contrary, they advocate the use of machine guns at very long range to help the advance of the infantry; however, they do not use machine gun detachments separated from other troops to overcome the resistance offered by a long skirmish line of the enemy.

In Switzerland, machine gun companies are used in the mountains and on plateaus, but they consider it to be an instrument that must be used in company with other kinds of fighting units. This use has the tendency of placing too great importance on defence, this being in accord with the character of mountainous country. The machine guns are used in platoons separated at great intervals, and from the various isolated positions they concentrate an overwhelming fire on the enemy. Cavalry does not open up a heavy fire suddenly, but depends on the effect of its machine guns in much the same way as other countries' cavalry depends on its horse artillery.



LEGAL RIGHTS AND DUTIES OF POST COMMANDERS WITH RELATION TO THE CIVIL AUTHORITIES IN TIME OF PEACE.

BY CAPTAIN BERKELEY ENOCHS, NINETEENTH INFANTRY.

INTRODUCTION.



A POST Commander in his relation to the Civil Authority in time of peace is bound to perform certain duties which naturally follow from his position as a representative of the power and dignity of the Federal Government; yet he must bear in mind that the Military is subordinate to the Civil Authority when on common ground, and that the two sovereignties (State and National) are coexistent and must be so considered in certain cases, each in its proper sphere.

To discuss the proper manner of maintaining the ascendancy of the sovereignty of the United States when proper to do so, and the relation of the Civil Authority to the Military in so far as it concerns a Post Commander is the object of this thesis.

The occasions for friction between the State and National sovereignties and between the Civil and Military powers can arise only when one invades or attempts to invade the proper legal sphere of the other. Therefore, a clear understanding of these spheres at once defines the limits of the powers, and indicates the rights and duties of each authority with relation to the other.

ARREST ON A MILITARY RESERVATION.

Soldiers upon enlistment and officers upon accepting their commissions change their legal status; that is, they become amenable to military laws laid down by Congress and their superiors, while yet retaining their amenability to the civil law, Federal, State and municipal; it follows from this that a person in the military service may find that the Federal, State or municipal laws have been violated by him, outside of a military reservation, and that a warrant is to be served on him.

The Post Commander becomes aware of this and he naturally is desirous of knowing his rights and duties. He does not wish to allow the sovereignty of the United States to be violated nor the military force weakened illegally, and yet to appear to desire to protect a culprit from punishment for his acts is to be avoided.

The main question is: Is the accused at liberty or has the jurisdiction of the United States been attached by arrest or confinement or service of charges?

If at liberty, the Post Commander is required:

To use the utmost endeavor to deliver the accused over to the civil magistrate and to aid the officers of justice in apprehending and securing him. (59th A. W.)

There is apparently no difference between Federal, State or municipal warrants in the law as laid down in the Article of War, and the question of whether the State reserves the right to serve process when ceding jurisdiction over the reservation does not enter into this particular case.

There are, however, some points to be noted in this connection, as follows:

The commanding officer before surrendering the party is entitled to require that the application shall be sufficiently specific to identify the accused and to show that he is charged with a particular crime or offense, which is within the class described in the Article. (59th A. W.) It has been further held that without a compliance with these requirements the commanding officer cannot properly surrender nor the civil authorities arrest within a military command an accused officer or soldier.

Where it is doubtful whether the application is made in good faith and in the interests of law and justice, the commander may demand that the application be especially explicit and be sworn to, and in general the preferable and, indeed, only satisfactory course will be to require the production, if practicable, of a due and formal warrant or writ for the arrest of the party. (Digest of Opinions, J. A. G., pages 35 and 36.)

The time of commission of the crime, whether before or after entry into the service does not affect the case.

Let the contrary state of affairs be looked into, *i. e.*, the accused is in arrest or the military jurisdiction has already duly attached in another way (service of charges with a view to trial). In this case:

The prisoner may be surrendered or not, as the proper authority may determine. A soldier under a sentence of confinement imposed by court-martial cannot, in general, properly be surrendered under this Article. (Digest of Opinions, J. A. G., page 37.)

I understand the "proper authority" mentioned to be the next higher commander, who, of course, can refer the question to his superior.

The qualifying phrase, "in general," allows the commanding officer to surrender the prisoner when the best interests of all concerned are served thereby.

The above refers only to the case where the offense was committed outside of the military reservation and involved:

Violence against the person, as manslaughter, robbery, assault and battery or affected a person in his property, as arson, burglary or malicious mischief. (Winthrop, page 1075.)

The following additional points are to be noted:

An officer or soldier accused as indicated by the Article (59th), though he may be willing and may desire to surrender himself to the civil authorities, or to appear before the civil court, should not, in general, be permitted to do so, but should be required to await the formal application. (Digest of Opinions, J. A. G., page 38.)

This duty of surrender in certain cases corresponds to an analogous duty on the part of the civil officials, as follows:

The Articles of War are enacted by Congress and have the force and authority of statute law, being ordained in the exercise of the constitutional power of Congress to make the rules for the Government and regulation of the land and naval forces. (Black's Constitutional Law, page 101.)

Since the language of the 59th Article of War implies that a demand made by the civil authorities for the surrender of an officer or soldier must be made to the commanding officer in a formal manner, it is, therefore, incumbent upon the civil authorities to make their demand in this manner, and it was so decided in the case of McRoberts. (16th Iowa, 603, 604.)

In this connection a quotation from Winthrop may be instructive:

It follows that when an arrest of an officer or soldier at a military post is made without a previous demand or after a demand not duly made in accordance with the Article and therefore not acceded to, the law is violated, the act is a trespass, and it is the right, as well as in general, the duty of the commander to retake the prisoner from the custody of the civil officials and remand him to his former status.

In so doing, the commander is entitled, and properly required, to employ such military force as may be suitable to affect such purpose in an orderly manner; but, before resorting to this means he will properly call upon the civil authorities to return the prisoner, allowing them a reasonable time for the purpose. And if he has any reason to question the policy of summary action he will first seek instruction from the Secretary of War. (Winthrop, page 1079.)

It is supposed that should an arrest be made of a person to whom the jurisdiction of the United States has attached the duty just mentioned would be very pressing.

The service of a subpoena is to be aided by the commanding officer as a matter of comity. The 59th Article of War does not consider subpoena. (Digest of Opinions, J. A. G., pages 38 and 39.)

SERVICE OF CIVIL AND CRIMINAL PROCESS.

The subject of the service by State officers of criminal process on a military reservation naturally follows here.

In the acts of State legislatures ceding jurisdiction over military reservations there is usually included what is known as a saving clause or reservation, which takes the following general form:

Except the service upon such sites of all civil and criminal process of the courts of this State. (Mil. Reservations, etc., page 263.)

To understand the effect of this and like saving clauses a definition of the term "process" is necessary.

The word "process" is in common law practice frequently applied to the writ of summons, which is the instrument now in use for commencing personal action. But in its more comprehensive signification it includes not only the writ of summons, but all writs which may be issued during the progress of an action. Those writs which are used to carry the judgments of the courts into effect and which are termed writs of execution are also commonly denominated final process. (Black's Law Dictionary.)

The term "civil and criminal process" would thus seem to include warrants, subpoena and the other usual writs except that of habeas corpus.

The writ of habeas corpus issuing only when the person to be produced is in confinement, cannot be served under the reserving clause, since in that case the jurisdiction of the United States has attached and State courts are without jurisdiction. (Tarbel's case, 13 Wallace, 397.)

The following quotation gives the opinion of the Supreme Court on an important question of jurisdiction:

Where a soldier in the Army of the United States was arrested for a crime and his term of enlistment expired before his trial and conviction, by court-martial it was held that the jurisdiction of the court having once attached by the arrest, it retained jurisdiction for all purposes of the trial, judgment and execution. (Barrett v. Hopkins, 7 Federal Reporter, page 312.)

A writ of habeas corpus issued by a Federal court must be obeyed however. (Sec. 751-2, Revised Statutes, U. S.)

In case the soldier, who has been ordered produced, is held awaiting trial by a general court-martial, the officer producing the prisoner should cite the case *in re* Davison, 21 Federal Reporter, 618.

In this case the court said:

It is not the office of a writ of habeas corpus to anticipate the action of the appropriate tribunal by determining in advance of its investigation and judgment, whether the accused is innocent or guilty of the offense for which he is held for trial.

He is legally in custody if the offense is one of which that tribunal (general court-martial) has jurisdiction.

RESERVING CLAUSES IN ACTS OF CESSION OF JURISDICTION BY A STATE.

An examination of the effect of these reserving clauses is now in order. The Constitution provides that when the United States purchases land for forts, dock-yards, etc., with the consent of a State legislature, exclusive jurisdiction over such land is vested in the United States. (Art. I, Sec. 8, par. 17.)

In case the land is acquired in any way other than that of purchase with consent of the legislature of the State, the terms of the act of cession define the extent of the jurisdiction ceded or reserved.

Thus, as it appears in the leading case of the Fort Leavenworth R. R. *v.* Lowe (114 U. S., 525), the State of Kansas ceded jurisdiction to the reservation of Fort Leavenworth, reserving the right to serve civil and criminal process thereon and to tax private property.

The reservation had not been acquired by purchase from Kansas. Upon the admission of Kansas as a State, the reservation had not been reserved in any way by the United States and became part of the State. The constitutionality of the terms of this act of cession was sustained by the Supreme Court of the United States in the following terms:

A State may cede to the United States exclusive jurisdiction over a tract of land within its limits in a manner not provided for in the Constitution of the United States and may prescribe conditions to the cession, if they are not inconsistent with the effective use of the property for the purposes intended.

In the general case the State has ceded jurisdiction over the military reservation, and it thus becomes United States territory

with the result that criminal acts committed thereon are triable only in the courts of the United States, the State courts having no jurisdiction, for,

After a State has parted with its political jurisdiction over a given tract of land, it cannot be said that acts done thereon are against the peace and dignity of the State or are violations of its laws. (Black's Constitutional Law, page 227, quoting *in re Ladd*, 74 Federal Reporter, 31.)

In the case *in re Ladd* the court, after showing that the grant of exclusive jurisdiction is a contract between the United States and the State granting the cession, deduced from that conclusion the following:

And the same cannot be affected or further limited without the consent of the United States, by subsequent act of the State legislature attempting to impose additional restrictions on the jurisdiction ceded.

In some cases the State reserves to itself concurrent jurisdiction with the United States in cases where

Any offense against the laws of the State committed on such place may be tried and punished by any competent court or magistrate of the State to the same extent as if such place had not been purchased by the United States. (General Act of Cession, Wisconsin, page 392, Mil. Reservation, etc. See also Maine and Louisiana.)

This provision is constitutional in so far as lands not purchased are concerned. On lands acquired by purchase the Constitution, Article 1, Sec. 8, par. 17, gives exclusive jurisdiction and the reservation of concurrent jurisdiction is not constitutional. (*Fort Leavenworth R. R. Co. v. Lowe*, 114 U. S., 525-538.)

From some decisions the impression might be received that the jurisdiction of the United States is limited to buildings, erections and land used for the purely military public purposes of the Federal Government. This is not the case, for the entire reservation, including farm and garden lands is included in the cession. (*Benson v. U. S.* 146, U. S., 325.)

It will be noted that the constitutional provision providing for exclusive jurisdiction of the United States laws down two conditions precedent: First, Purchase; Second, Consent of the legislature of the State. Hence if the United States has purchased real property in a State and the legislature has not recognized the presence of the United States, the latter is an ordinary proprietor and the land is State territory.

EXCLUSIVE JURISDICTION IN TERRITORIES AND INSULAR POSSESSIONS.

It is evident that, since in the territories and the insular possessions the sovereignty of the United States is the only one existing, there is no such a thing as exclusive jurisdiction as distinguished from the case of the coexistent sovereignties, National and State, and

As a general rule in the absence of any provision in the organizing Act or other United States Statute exempting officers and soldiers from the jurisdiction of the authority of the local courts and officials, they will be amenable thereto in the same manner and to the same extent as are in the civilian inhabitants where such amenability may not interfere with the due performance of their military function. (Winthrop, page 1406.)

Therefore, acts committed within military reservations in the territories, District of Columbia, Porto Rico, Philippines and Guam are triable in the courts of those subdivisions. (*Grafton v. U. S.*, 333.)

A further result of this condition is that a trial in a Federal civil court is a bar to trial by court-martial in so far as the military and civil courts have identical or concurrent jurisdiction, as in larceny, but I take it that if a purely military offense is included in the criminal offense a trial on that question may be had in the military court. For instance, a soldier assaults and strikes an officer; he may be tried by a civil court for assault and by a military court for the breach of discipline under the 21st Article of War, provided he was found guilty in the civil court, but cannot be tried for the assault and battery a second time by the military court, nor in case he was found not guilty in the civil court. (*Grafton v. U. S.*)

The service of process of the courts of the territories and other Federal subdivisions on a military reservation therein is restricted only by specific local or Federal laws, and the requirement that the civil officer must apply to the commanding officer before attempting to serve his warrant or other writ.

The civil officer is holding under the authority of the United States and is on the territory of that sovereignty when on a military reservation.

COMMANDING OFFICER ENTITLED TO SERVICES OF SOLDIERS AND CIVILIAN EMPLOYEES.

The case *in re Schlaffer* 154 Federal Reporter, 921, is interesting as giving the views of a Federal judge on the question of

the duty municipal authorities have to not deprive the United States of the services of a soldier by arresting and imprisoning him as though he owed allegiance to the civil power only, when outside of a reservation. He said in his opinion :

The enlisted men are within the State and within the city, not in accordance with their own will, but in accordance with the orders of their superior officers, to whom they are answerable, and, although temporarily off duty for a short time, they are constantly subject to the terms of their enlistment and the orders of their officers. If absent from the post without leave they are liable to be court-martialed and punished for desertion; if drunk and disorderly, even while on leave, they are liable to punishment under the rules of war although it be time of peace, and it is not considered that they should be treated and held in any detention or attempted punishment, the same as though they were answerable to no other power.

Their position and the requirements of their constant duty demand in behalf of the National Government from the municipal authorities such a recognition of its rights as would accomplish a preservation of the peace and the observance of the city ordinances as would in no way affect their duties as soldiers.

In this case a soldier was arrested and confined by the city police in the course of a raid upon the soldiers planned by them; an excessive fine was imposed by the city court, and upon default of payment a long term of imprisonment was substituted.

The commanding officer applied for a writ of habeas corpus, which was granted, the reasons being summed up in the opinion quoted above.

Commanding officers have the right to the services of civilians employed on the reservation at all times, and in the case of *Prundt v. Pendleton*, 167 Federal Reporter, 997, it was decided that a teamster employed by the military authorities could not be compelled to do work on a county road. It should be remarked that he was not a citizen of the State of which the county formed a part, but the court in its decision laid down the principle that civilian employees of the Army can not be taken from their employment to work out a local tax.

CIVIL ACTIONS AND THE STATE COURTS.

So far the discussion has referred to criminal acts as distinguished from civil actions, the latter are now to be considered.

A civil action is one brought to recover some civil right or to obtain redress for some wrong not being a crime or misdemeanor. (Burrill's Law Dictionary, Vol. I, page 294.)

A civil action for redress for a wrong committed on a reservation may be tried by a State court as well as in a Federal court, whether the right to serve civil process was reserved or not. This conclusion is arrived at as follows:

1. Congress has extended the constitutional provision that "full faith and credit shall be given in each State to the public acts, records and judicial proceedings of every other State," to the territories of the United States and the countries subject to the jurisdiction of the United States. (Act March 27, 1804.)

2. If civil process may be served by the officers of the State court, jurisdiction of the subject matter may be obtained by that court. The trial will proceed and the decree may be executed by the service of civil process.

3. If no reservation of the right to serve the civil process was made, or in case the reservation was purchased with the consent of the legislature of the State, the property or the person of the defendant may be attached outside of the limits of the reservation, the trial then proceeds and the execution is asked for in a Federal court.

In this connection the following quotation is of interest to commanding officers:

After such cession (of jurisdiction), the municipal laws of the State governing property and property rights continue in force in the ceded territory, except so far as in conflict with the laws and regulations of the United States applying thereto. (*In re Ladd*, Federal Reporter 74, page 31.)

The following extract from a discussion of this subject by the one-time Judge Advocate General, General Lieber, is instructive. In discussing the case of *Madden v. Arnold*, 47 N. Y. Supplement, Nov. 10, 1897, he says:

In absence of legislation by Congress, although the injury to recover damages for which the plaintiff brought the action was sustained on land over which the National Government had exclusive jurisdiction, it had no more exclusive jurisdiction over such territory than the respective legislatures of the neighboring States of Massachusetts, Pennsylvania or Ohio have over their respective territory and had the injury occurred within the limits of either of said States an action could have been maintained in the courts of New York to recover damages therefor.

If an action can be maintained in the courts of New York by a citizen thereof for a personal injury suffered in another State or country, there is no good reason why such an action cannot be maintained when the injury was committed in the State of New York on land, jurisdiction over which had been ceded to the United States.

RIGHTS OF A POST COMMANDER OUTSIDE OF A RESERVATION.

Having examined the rights and duties of a post commander on a reservation in time of peace, the next question is how far may post commanders invade the civil sphere to perform their duties while remaining within their rights, and how must the civil authorities aid them? Sec. 3748, Revised Statutes, gives authority to any officer of the United States, civil or military, to seize clothes, arms, military outfits and accouterments found in the possession of any person not a soldier. While a similar section relating to the sale of arms, clothes and accouterments is included in the Act of March 4, 1909, the above section was not expressly repealed or amended. This section of the Revised Statutes of course gives no authority for searching a house for articles of Government property.

The right to arrest a deserter includes the right to enter a house in doing so, and the fact that harboring a deserter is prohibited by the Act of March 4, 1909, indicates that a warrant for the arrest of the person harboring the deserter, or a search warrant, may be obtained from a United States court or commissioner.

The same act also requires that any person concealing or harboring a deserter must turn him over on demand of a proper official; no doubt army officers are proper officials.

This Act of March 4, 1909, already referred to, provides a punishment for going upon a reservation in the following cases:

1. After having been removed or ordered out by the commanding officer.

2. For purposes prohibited by law or regulations made in pursuance of law. This requires the United States courts and the United States commissioners to take cognizance of such cases.

In a hearing upon application for a writ of habeas corpus applied for by the United States in the case of a soldier held by a State official (Lipsett) for trial for homicide, the act which resulted in the alleged homicide being the firing on an escaping prisoner, a Federal judge laid down the following principles in his decision:

In case a soldier is held by State authorities, a court or judge of the United States may, upon application of the United States, inquire into the cause of his detention by issuing a writ of habeas corpus; and if, upon this inquiry, it is found that he is

confined for an act which was committed in the discharge of his duty as a soldier, the court has authority to determine summarily the allegation upon which he is held is true, and if it is found not to be true, to discharge the prisoner. (*U. S. v. Lipsett*, 156 Federal Reporter, 65.)

IN PHILIPPINE ISLANDS.

In the Philippine Islands the Commission has enacted laws which are important in their bearing on the rights and duties of commanding officers. The more important are:

I.

It shall be a conclusive answer to a writ of habeas corpus against a military officer or soldier and a sufficient excuse for not producing the prisoner if the commanding officer or any general officer in command of the department or district shall certify that the prisoner is held by him

* * * * *

2. As a member of the Army, a civilian employee thereof or a camp follower subject to its discipline. (Act of the Philippine Commission of October 1, 1901, 272, as amended by Act of June 23, 1902, 421.)

By the same act the issuing of any writ of habeas corpus against any military officer or soldier in an unorganized province is prohibited.

2.

2. The military authorities shall have the right to eject any intruder or trespasser on public lands reserved by the President for military purposes in the Philippine Islands and to suppress open breaches of the peace and abate nuisances thereon.

3. No branch of the civil government in force on or over any public lands reserved by the President for military purposes and no civilian resident thereon shall interfere with military administration or the use of such lands for military purposes.

7. No arrest of any officer, soldier or civilian employee in the military service of the United States on any military reservation shall be made except upon warrant in due form in writing and served upon the commanding officer thereof.

8. All laws or parts of laws in force in the Philippine Islands not inconsistent with military use of any public lands reserved by the President for military purposes shall be in full force and effect over said lands. (Sections 2, 3, 7 and 8, Act of Philippine Commission, November 24, 1902, No. 530.)

3.

After prohibiting the sale, giving away or furnishing intoxicating liquors, wine or beer within certain specified limits, it is provided that

For the purpose of enforcing this Act, and for no other purpose, the commanding officers of the United States troops stationed at the places named shall have the powers of a justice of the peace as defined by existing law.

Provisions for arrest and confinement in case the commanding officer acts as a justice of the peace are added.

The Act also requires of commanding officers certain duties of surveying the limits of the no-liquor zone and notifying the vendors of liquors as well as the municipal authorities concerned of the survey. (Sec. 1-6, Act of the Philippine Commission of March 28, 1903, No. 709.)

The following from the Circuit Court case *in re Turner*, 119 Federal Reporter, 231, is valuable in indicating the responsibility of army officers to State courts:

An officer of the United States Army acting in the discharge of his duty in obedience to orders of the Secretary of War, who in turn is executing an Act of Congress, is not subject to arrest or warrant or order of a State Court.

A State Court is without jurisdiction to enjoin an officer of the United States Army from doing a work which he is commanded to perform by his superior officer in the execution of an Act of Congress and such an injunction being void, its disobedience by the officer is not a contempt, and his arrest and detention therefor is without legal authority.

GENERAL VIEW OF SUBJECT.

To this point the discussion has considered particular cases as illustrated by decisions and opinions of courts and military law writers; therefore, a brief generalization may not be out of place.

Every part of the United States is subject to the Constitution and the Constitutional Federal laws; the State laws properly enacted are in force in all parts of the State over which the State has jurisdiction.

When the Federal law and the State law conflict the former takes precedence and is the rule of action for all.

If a post commander acts under Federal law, and within the provisions of that law, he is secure from interference by the State civil authorities, and he may so act in any part of the United States since there is no exclusive jurisdiction of a State.

The statement has been made that a soldier who committed murder on a military reservation in Kansas could not be hanged in that State, since a State law forbids hanging.

The laws of the United States authorize hanging, and if a Federal Court sentences the soldier under that law he will be executed in the United States at the place chosen by the proper official; it may be on territory over which the United States has exclusive jurisdiction or it may be at some other place in the United States, whether within the space marked out by the boundaries of Kansas or not, provided the owner of the land used by the United States acquiesce in this use of his property.

If the Federal law be exceeded, the officer becomes liable to trial by a State court for violation of the State law.

Another important principle is the one which tends to secure to the executive branch of the Federal Government the unimpaired use of one of its important arms, the army.

This is based upon the following considerations:

1. The executive branch of the Federal Government is charged with certain beneficial duties to all the States, therefore one State should not impair the efficiency of one of the means to the detriment of the others.

2. The United States pays its officers and soldiers and is entitled to their services. Also, a man trained as a soldier cannot be replaced in an instant.

3. Local interests sometimes find their expression in laws which are not always applicable to those whose duties are national.

In conclusion, it may be remarked that the above has been written from the point of view of the military officer. Since if read at all it will be by army officers, it is believed that it is preferable to present the subject from that angle.



THE GERMAN ARMY.*

By RICHARD THIRSK.



THE German Army is composed of the combined armies of Prussia, Bavaria and Saxony. Generally speaking, it might as truthfully be called the Prussian Army, since 19 of the army corps belong to Prussia, whereas Bavaria has but 3, and Saxony 1. The total strength of these combined armies during times of peace is put down on paper at something over 600,000 officers and men, divided into 629 battalions of infantry, 495 squadrons of horse, 574 batteries of field-artillery, 40 battalions of fort-artillery, 34 battalions of engineers, and 16 machine-gun divisions. Besides these, there are the various necessary auxiliaries for serving such a large army, including the medical staff, the commissariat, the veterinary surgeons and other non-combative forces. A bill passed recently by the Reichstag empowers the authorities to augment largely the number of men serving in the ranks.

The term of service in foot-regiments is for two years; in the cavalry and horse-artillery men must remain a year longer. From active service, soldiers pass into the first reserve for a period of five years, during which they are frequently called up to their regiments for longer or shorter periods of drill. At the end of this time they pass into what is known as the *landwehr*, or second reserve, and finally into the third reserve, in which they remain until the completion of their thirty-ninth year, when they are freed from military service.

While on active service the infantry soldier receives 6 shillings a month pay, the cavalryman 2 shillings more. Lieutenants begin with 64 pounds 10 shillings a year, rising slowly through various grades to 699 pounds a year, which is the sum paid to commanding generals. To this must be added a small allowance for rent granted to officers who cannot be housed with their regiments.

The Kaiser is the *Oberster Kriegs-Herr*—that is to say, the supreme head of the army, whose approval must be obtained in all that concerns it, who controls all its movements, and who

*From *Chambers' Journal*.

alone has the right and power to send it into action. He has taken upon himself the responsibility of its efficiency and conduct, and it is very possible that should he take it into action he may command it in person.

In his position as chief of the army, the Kaiser is assisted by the military cabinet, composed of a number of high military authorities, whom the Kaiser elects as overseers of the various departments of the service, and whose duty it is to report to His Majesty in council all that takes place in the German Army and in the armies of foreign nations.

Next to this is the war office, which is under the charge of the minister of war. The latter is a soldier of long and varied experience, who also represents the army in the Reichstag, answering the questions asked by deputies concerning it, and negotiating in the Reichstag the yearly grants necessary for the maintenance of the army.

The war office is divided into a number of sub-offices, each under the control of its own military chief, who is subordinate to the war minister. From these offices instructions, money, provisions and all other necessities are despatched to the units in the barracks or in the field. Thus the whole organization meets under one roof, which prevents any confusion or the possibility of one part working against another, and constitutes the war office the great controlling house, without which the army would fall to pieces.

But the organizing power, the brain, the eyes, the ears, the very soul of the army, is the general staff. This is a colossal institution, composed of only the picked men of the whole army—those men who have distinguished themselves by their military genius, their knowledge of tactics, their capacity for organizing and inventing, or by other distinguished qualities calculated to increase the efficiency and usefulness of the army. They are all of them men with ideas, and of unquestionable ability, devoting themselves entirely to the work of perfecting the complicated machine of which they are parts. The general staff is also the intelligence department, and is responsible for all necessary information regarding the strength, movements, guns, arms and every conceivable particular concerning foreign armies, forts, defenses and the like. According to this information, changes are made in the German Army to cope with every emergency, and plans for attack or defense are worked out. Basing its conjectures upon the information in its possession, the general

staff has considered every possible chance of an attack upon Germany from any quarter, and has shown how such attacks are to be repulsed and how the enemy is to be driven back. Recognizing the possibility of an offensive campaign, it has worked out, on paper, campaigns in foreign countries. Locked away in its secret safes the general staff has its plans, prepared with the greatest mathematical exactness, for the conquest of nearly every nation.

It is when one comes to know something of the general staff that one realizes what the German Army really is, and understands something of its magnitude. To discuss the possible success or failure of its plans and theories would be idle. The fact that these have been prepared, and are kept constantly up to date, is a proof of that spirit which courts success, and of the determination of the nation to be ready for each and every emergency. All these plans and theories are tested from time to time in the light of recent events. Struggles between combating powers are watched by the general staff with the closest attention, all the incidents marking their progress are impartially criticized, and the lessons learned from these are applied in practice, forming the groundwork for changes and improvements. Another equally important duty is to secure carefully prepared plans of all countries in which Germany may at any time be called upon to carry out military operations.

Probably the most serious work falling to the general staff is the arranging and preparing of secret plans for the mobilization of the army and reserves the moment war is declared. As a knowledge of these plans would be of incalculable service to a hostile army, and as there is always the possibility that some part at least of the secret may be betrayed to some interested foreign power, the plans have to be constantly changed and altered, which means that the work on them is never ceasing. With what smoothness these plans work, collecting the whole fighting army and transporting it to the scene of action, together with all necessary munition and provisions, was amply demonstrated during the Franco-Prussian War of 1870-71. Then, as now, every general had his sealed orders and a time-table, which it was only necessary for him to follow in order to arrive at the scene of action at the time he was expected. So well did these arrangements work out that, though hundreds of units were involved in the various movements, Moltke could calculate with certainty

to within a few minutes upon the arrival or departure of any one of these units.

To-day, with increased railway facilities, the system is even more perfect. Yet the railways have added to the complication of the task, making it more difficult to get a comprehensive view of the perplexing network of lines throughout the country; and the work of timing the arrival and departure of trains from all parts of the Empire, and of managing everything so that no block can possibly happen, drives many officers insane. This work in the time-table department is so dreaded that it is difficult to induce officers to take to it, in spite of the increased social advantages which such a position on the general staff offers them.

This is, as briefly as it may be told, the composition and machinery of the army which was established by Frederick William I, and developed by Frederick the Great into that powerful weapon which has helped to make the nation what it is to-day. Its history has been chequered, and does not always justify the pride with which Germans boast of its deeds prior to its achievements in the war against France, or even since then; yet no one can gainsay that as a fighting-machine it is as nearly perfect as human means and genius can make it. It certainly is a wonderful institution, a marvel of ingenuity and organization, a monument to the patience and skill of those who are responsible for its existence.

The motto of the German Army is "Ready," and that is the keynote of everything done in every department of it. A solid business-like spirit pervades everywhere, and nothing that brains, energy or money can suggest or do is spared, nor anything left undone which may help to keep it true to its motto and be always "ready."

Unfortunately it is an axiom that there seldom is a good that has not its attendant evil; and German militarism is no exception, as the Germans themselves are the first to admit. One of these evils is its increasing cost to the nation; but this must be looked upon as a necessary evil, since the army is the symbol of settled security to which the nation owes its existence, and endows it with that confidence so essential to industrial and commercial success.

Heavy as it is, the cost of maintaining the army is not the heaviest part of the military burden. It is as nothing compared to the enormous sacrifices which universal military service demands; and this hits hardest the middle or commercial classes.

whose sons must give up to the army some of the best years of their life, which, needless to say, generally proves a severe handicap to them in the prosecution of their studies or the following of their commercial pursuits. The frequent claims which the army makes upon their time at varied periods causes a feeling of unrest and dissatisfaction. On this very practical point all the German's theoretical pride in the army vanishes. He complains that universal military service is a vicious, unrelenting institution, which makes no allowances or exceptions, which never takes into consideration whether or not it is ruining a young man's chances in life. It is so far-reaching that it hinders and upsets the ordinary course of business. Merchants and manufacturers look upon it as a bugbear. Almost the first question they ask an applicant for a vacancy is if he has finished his military service; and if he has not, they prefer not to employ him. They complain that they no sooner have taught a young man their business methods, and find him of use to them, than he must leave them for the army, and they cannot afford to let their business stand still until his return, so they have to fill his place as best they can; and when the young man leaves the service he is without a situation. No amount of argument can prove that it is a good thing to disturb the routine of a business, either for employer or employed. Therefore, however beneficial compulsory service may be for the nation, it damages the individual. And the hardships do not cease on expiry of the first term of military service, for when the reservist goes to exercise for eight weeks with his regiment either he and his family must suffer, or his master.

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It is because of universal military service that Germany has never been a successful colonizing power. The adventurous young men, those who might be getting about the world, and probably winning territory for the Fatherland, are obliged to stay at home for the army. If they do go away, they must return within a certain time and at their own expense. This is seldom convenient or practical, and compels them to choose between two alternatives: either they must give up what prospects they have before them and become soldiers, or they must throw off their allegiance to Germany entirely, becoming citizens of the country in which they have settled.

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Realizing some of the drawbacks of universal military service, the Government has tried to minimize its hardships by intro-

ducing what is known as the *Einjährig Frei-willigedienst*, or one-year service. The privilege of serving for only one year instead of two is granted to all who pass the middle classes of a high school. For this privilege they have to pay all the costs out of their own pockets. These include, kit, uniforms, board and lodging, a man-servant, and the numerous expenses incidental to a soldier's life, which in the crack regiments may run up to 1000 pounds for the year, and which in the so-called cheap provincial regiments average 250 pounds. From these one-year service men are recruited the officers of the reserve, and as this title carries with it much influence, most young men are ambitious to obtain it. But as a very large percentage of those who possess the necessary certificate have not sufficient money to pay their expenses, they are obliged to launch into debt, and to place themselves and their parents under obligations, which burden hampers them in their future career. Hence many young men who have the one-year service qualification and not the necessary funds are obliged to serve as ordinary soldiers; for, although the Government has a fund for assisting such, the conditions under which it is granted are not particularly enticing.

Another objection to this favor shown to educated men is that one-year service men are not popular with the ranks, being considered the legitimate sport of all who can take advantage of them. Nor are they looked upon with much favor by drill-instructors, except in those instances where there is a prospect of future gain. The drill-instructor is generally more noted for his bullying and abusive proclivities than for his intelligence, and only too often uses the power confided in him to make the soldier's life unbearable. His idea of a soldier is that he is something like a wild animal, which must be trained to do a certain number of things in a certain way within a certain time. The authorities allow him considerable latitude as long as he produces the results required of him, though he has frequently to be court-martialed for the brutal and disgusting methods he adopts.

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Even the officers have their grievances. They feel in all things the power of the "one hand," as they express it; that the army is too much the Kaiser, being held in subjection to his absolute will. Every now and then he introduces changes in the officers' equipment or the style of their uniforms by way

of experiment, the cost of which comes out of the pockets of the officers, who grumble about the expense. Officers are in no sense of the word free agents. Even their opinions are prescribed for them; and if they hold views on politics, government and progress which are known to be at variance with those held in high quarters, they are compelled to run the gauntlet, and possibly to leave the army. They are forbidden to smoke in the three fashionable streets of Berlin; and if, when they are driving, they meet a royal equipage with the coachman holding his whip aloft, thereby denoting that some royal personage is behind him, the officers must stop their carriage, alight, and stand at the salute until the royal equipage has passed by. No officer can marry without the consent of his superiors, who inquire if his intended wife is a fit associate; and should the result of the inquiry prove favorable, a fixed sum of money must be invested in the regimental funds, upon the interest of which the officer and his wife may be able to keep house and entertain in a manner befitting their position in the army.

Doubtless the sorest point of all among the officers is the slowness of promotion. Because of this, many of them, who are poor to begin with, and who have not the good fortune to marry money, have to eke out their salaries by remittances from home until they are over forty years of age. Usually an officer without influence serves something like twenty years before he obtains a captaincy, and before he can attain to any of the more lucrative positions he has reached the age-limit, and is retired on a pension wholly insufficient to keep him in comfort. It is stoutly maintained, and with some show of truth, that all the good posts in the army go to favorites belonging to the nobility, who practically hold a monopoly of such positions.

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Considering the large number of men serving with the colors there is comparatively little crime in the German Army. The latest statistical report for the year 1907 gives the number of military and civil offenses dealt with by the military authorities as 10,253, and this proves a considerable decrease on the previous year. There are, however, a number of irregularities for which the army is either directly or indirectly responsible, but which are not included among the offenses, and are therefore not published in statistics. The army is more concerned about drill than about morals. Its one and only aim is to lick the soldier into proper shape, so that he may fit exactly into his place in

the machine. Its method of accomplishing this end is systematically to crush all individuality out of him, and to make him one of the crowd, moving in blind obedience to the word of command. Hence officers will tell you that in a whole regiment they cannot find more than twenty or thirty men in whom they can place any confidence; and it is on those few that they must rely for leading all the others, whom their officers characterize as being hopelessly stupid and entirely innocent of any common-sense.

This is not a particularly favorable comment upon what is often lauded as being the great social and economic advantage of the army—the advancement of the education of young men whose schooling has been neglected. True, there are schools in which those soldiers who come to the army ignorant of orthography may learn to write their names legibly, but it is questionable if beyond this they learn anything of real practical value to them. Young men who have been brought up on farms naturally have their wits sharpened through contact with the new world into which the army introduces them and the new companions whom they meet. Yet experience goes to prove that this kind of education is not always good for them. It makes them dissatisfied with the country life they have hitherto led, and causes them to look upon it as being narrow and cramped, and in order to escape it they remain in the over-populated towns, adding their quota to the unskilled labor markets. Thus the education received in the army has been largely responsible for the undoing of Germany as an agricultural nation, a result which the military authorities have tried in vain to avoid.

Realizing the seriousness of this, the Kaiser has now thrown all his influence into the movement which is endeavoring to stem the tide flowing townward. What he most wants is the healthy type of soldier who hitherto came from the agricultural districts, but who is fast disappearing. The various schemes favored for the accomplishment of this end are likely to cause some interesting developments in German legislation, especially when the land-reform question comes to be finally dealt with.

So long as the army remains one of the greatest factors in the country for the spread of political propaganda, a small holdings scheme, or any other plan, can only meet with partial success. Political influence is working more mischief than the authorities can counteract, much as they try to check it. What gives them the gravest concern is that this political influence is

mostly in favor of the spread of the Social Democratic agitation. The members of this party serving with the colors soon succeed in interesting their dissatisfied comrades in the movement, and introduce them to their societies. Those men who later return to the country districts take with them their new political ideas, influencing people in remote parts who have never before heard anything about the party, and this had a tangible effect at the polls at the last elections. It is a very important part of the Social Democratic Organization and plan of campaign, and the party, in spite of its recent defeat, succeeded in adding over 500,000 votes in its favor in the course of a few years, and that in face of the strenuous efforts of the Government to effect a reduction.

The seriousness of this influence is proved by the fact that the authorities do not trust men to serve in the regiments stationed in their native districts. For instance, conscripts from German Poland are made to serve in West Prussian regiments or are brought to Berlin, while those from Elsass and Lothringen are sent to the Polish province and to East Prussia. In this way towns are garrisoned by men who are entire strangers to the districts, so that in the event of a rising among the inhabitants there is little chance of any sympathy between the latter and the soldiers whose duty it would be to deal with them. In any case, the authorities admit that dividing the troops in this way gives them a feeling of greater security.



MUSINGS OF A SUPERANNUATED SOLDIER.

BEING EXTRACTS FROM AN UNPUBLISHED MS. BY THE LATE MAJOR
JAMES CHESTER. U.S.A. (RETIRED).



A SUPERANNUATED but healthy soldier, with plenty to eat and nothing to do, must think. But unrecorded thoughts are like stories written in the sand below high water mark. Both are bound to be obliterated: those by failing memory, these by the rising tide. Such waste should be avoided. Hence these pages. They are not recorded studies. They are merely musings which were written down as they arrived.*

PECULIARITIES OF WAR.

All wars are not alike. There were peculiarities about our campaign against the Indians in the Everglades of Florida which writers on the art of war never dreamt of, and which the same soldiers would never practice against the Indians on the plains. If some enthusiast, full of our Everglade experience, had written a new chapter on the art of war under the caption, "How to Fight Indians," the soldier on the plains would have laughed at him. Fortunately, there were no war correspondents in the Everglades, and the military profession escaped a heavy infliction.

It may seem unfair to assume such an absurdity, but one feels justified by experience in doing it. Abnormal campaigns are always occurring. The English have one on their hands just now, in South Africa, and we have one in the Philippines. Both are irregular in the extreme. And yet military prophets are beginning to claim that the experience gained in them will change the art of war. That the battles of the future will be "soldiers' battles," in which every soldier will act according to his own judgment, and courage will be less important than keenness of vision. What a magnificent chapter might have been based upon our experiences in the Everglades! There the

*Written between 1902 and 1904.

men lived for a month on raw salt pork and ancient hard bread. Nothing was cooked. Not a fire was lit during the month. The operations were like a game of hide-and-seek. The Indians were the hiders, and they were successful. But the Everglades were to blame for it. Such a game would have been impossible in the open.

And so it is with the campaigns now going on in South Africa and the Philippines. There are peculiarities about the theater of operations in both cases which make the application of all the rules prescribed by the art of war impossible. But that does not justify a change in the rules. The most that the cases call for is adaptation of the rules to the circumstances, and experience must guide the adaptation. No man, however expert in the art of war, can hope for immediate success against a peculiar adversary in a peculiar theater of operations. He has first to learn the peculiarities, and then to make the necessary adaptations. And learning the peculiarities takes time.

To kill a few of the enemy, or to drive them from their positions, is rarely a satisfactory return for losses sustained. If the enemy is courageous, well armed, a good marksman, and well posted, every defeat might be counted a success for him, especially if a safe retreat is practicable and plenty of ammunition and food are available. Such a game of attack is hardly worth the candle. In effect it is very much like long-range fighting.

Battles should be avoided except where an enemy's defeat would make his destruction possible. Of course, that applies only to the side that has the initiative. Defensive tactics contemplate fighting for delay and opportunity. They can never conquer, unless they are changed into the offensive.

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ANCIENT CUSTOMS LIKELY TO BE REVIVED.

Modern inventions have made it possible for a defender to prolong a campaign almost indefinitely if his assailant abides by the old rules of war. The old rules of war were made to fit a contest between armies of professional soldiers. Non-combatants were free from molestation as long as they abstained from acting as partisans. When, however, the whole nation, men, women and even children, are active combatants, the old rules of war ought to be disregarded.

The spectacle of a nation feeding, sheltering, and caring for the families of active enemies is philanthropy run mad. Modern inventions and modern military methods have made a return to ancient customs of war a necessity. A conquered country will have to be laid waste; the inhabitants will have to be driven out or deported on surrender, and the land will be possessed by the conqueror.

This sounds like barbarian cruelty. And it is. Barbarians practiced war that way in ancient times. War is a barbarous business, and the fact that it is so should have a deterring effect upon nations. But war sometimes becomes a duty and the Government that avoids it is unworthy of existence.

When the territory of any nation becomes too small for its population, and there is no more land to discover and colonize, it becomes the duty of the Government of that nation to conquer new territory for the people. "Survival of the Fittest" applies to nations as well as every organism in nature. Cruel it may appear to be; but it is God's Eternal Law. The idea that a few thousand men can claim a vast territory capable of supporting as many millions, and imagine that their claim gives them the right to have and to hold that vast territory while a neighboring nation or any nation is actually starving because they cannot live off their land, is preposterous. The overcrowded nation, blest with abundant fecundity, must provide for its offspring by the sword. Effete races of men are not worth preserving. They merely cumber the ground. Might makes Right in the ethics of the universe, and maudlin sentimentality cannot change the decree.

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STANDING ARMIES.

This line of thought leads naturally to the question of standing armies. Would it be good policy to disband standing armies, and devote the whole energy of the nation to the creation of an efficient militia? If that were possible it would undoubtedly be wise. But it is not possible. Efficient artillery and cavalry troops cannot be created in that way, and even infantry have something more to learn than shooting straight and executing marching maneuvers. It is a notorious fact that disease kills more men in an active campaign than the enemy does, however excellent his marksmanship. Camp sanitation and campaign

cooking are essential parts of a soldier's training which militia never can acquire in time of peace. In active operations against an enemy they acquire it in course of time, but at fearful cost. For this reason, then, if for no other, a regular army, small it may be, but proficient in all the requirements of camp and garrison life, is an absolute necessity. It is the model upon which militia organizations form themselves. Without such a model years might be consumed in acquiring even a smattering of that knowledge which regular soldiers acquire unconsciously by absorption. The traditions of the service, the customs of war, the etiquette of the camp and barrack room, and a host of others, are unwritten chapters in the art of war; but they are important and must be acquired, if not in the regular way—by absorption—then by sad experience and at fearful cost.

It may be that the wars of the future will furnish a fine field for irregular troops—one cannot help thinking that they will. But their employment will call for a new staff department, namely, the Sanitary Department. In actual war the Medical Department has enough to do without assuming sanitary supervision of the camps and kitchens of the army. There should be one Sanitary Company in each regiment, the officers of which should be sanitary experts. The company should do all the police work of the regiment, and nothing else. With regular troops this work is always well done, they need no sanitary company. But militia or irregular troops ought to have one to do all the cooking and fatigue duty for the regiment. Perhaps two such companies might be needed. Men should never be detached for fatigue or daily duty work from line-of-battle companies.

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ADVANTAGES OF THE DEFENSIVE.

It is asserted by some men unfamiliar with practical line-of-battle work that a comparatively small army, properly posted, with modern muskets in their hands, could defend quite an extensive frontier. Well, if the assailant was without transportation, and therefore tied to the railroads that brought his supplies, and compelled to deliver a frontal attack on the enemy, at a known point, the defender would have immense advantage, and would probably beat off ten times his numbers, easily enough. And, if the position that must be attacked, if any attack is made at all, is a natural fortress where the defenders

can see without being seen or exposed in any way, perhaps they could repulse an attack by twenty times their number. But if the assailant had sufficient transportation, and could extend his operations one or two marches in either direction, he could select a point of attack to suit himself, and also concentrate behind that point troops enough to carry the position without letting the enemy discover the concentration; and the thin line of riflemen, however well posted and armed, would be broken like a spider's web. And, when broken at one point, it is untenable at all. The whole line must give way. And if the assailant has mounted troops enough to follow in hot pursuit, the enemy's destruction should be possible.

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IRREGULARS DRIFT TOWARDS BARBARISM.

But war, when it is waged by irregular troops, is apt to degenerate into a rough-and-tumble contest. The rules of the ring will be disregarded. Already we have seen the white flag desecrated. Falsehood and forgery have been used in civilized war, and the next step may introduce poison into the military outfit. In old times, and in times not so old, an army officer would not lie, even to an enemy. But ancient chivalry seems to be dying out, and what will the harvest be? One seems to see the old methods of conquest revived. A land laid waste. Women and children driven before the invader, after or into their army of defenders, to look there for shelter and subsistence. Or more horrible still, sold as the legitimate spoils of war. Lands thus conquered would be sold at auction to the conquering people, or given as rewards to their most deserving leaders. The proceeds of such sales should pay the expenses of the war.

When one hears a thoughtless populace cheering and praising treachery in war, however cunningly conceived and gallantly executed, he seems to hear, away in the not very distant future, the wail of women and children driven from their burning homes to starve and die in the open, or from fatigue and exposure following their husbands and fathers in a barbarous campaign.

At one time that was the unvariable accompaniment of war, and it would be to-day if war was waged by the manhood of a nation, clustered together in unmanageable mobs, without discipline and without pay. Civilized war is horrible enough, but it is waged without personal hatreds. Introduce falsehood,

treachery and forgery on either side, and you arouse the savage which sleeps in the breast of every man, and retaliation will seem to be a duty, and the end will be barbarism as above described.

One would expect, then, that an invader after breaking through the defender's line, would hurl his horsemen through the gap, with orders to avoid fighting as much as possible, and destroy. Of course he would live on the country and leave nothing behind him. Houses, factories, bridges, roads, everything would be destroyed, and the helpless inhabitants would be left to be cared for by their own army, or to die of exposure or starvation. The invading horsemen would sometimes have to ride hard, but as they would have no objective point, and would remount themselves wherever and whenever they found horses, and replenish their haversacks wherever and whenever they found food, it would be difficult if not impossible to head them off. Then there might be, say, half a dozen such flying columns at work, some of which would come to grief, perhaps; but no kind of war can be conducted in perfect safety, and it is believed that the losses from this kind of warfare would be less than they have been in campaigns conducted under the somewhat ridiculous rules of war. The man who can conceive, organize and execute such a campaign will be the great military hero of the twentieth century.

Is such barbarity destined to be the solution of the problems presented by the modern musket, marksmanship, and the Maxim gun?

MIMIC WAR.

Mimic war is always amusing if not instructive. The piece of play acting called a "Sham Battle," if well performed and painted up a little by the imagination, gives the lay mind some idea of what a real battle is; but the veteran's eye misses much that is characteristic of the real thing. The writer of this was present at the maneuvers of a French corps in the north of France in 1885. The crowning incident of the operations was an assault upon a strong natural position, defended by a skeleton army consisting of one or two companies of Engineer troops. The hill or ridge to be defended was the highest point in sight in any direction, and the Cathedral steeple, built on the highest point of the ridge, could be seen for twenty miles. The country was open, undulating and unwooded and entirely destitute of fences of any description. The approach was admirably con-

ducted, the assailants never once showing themselves until they deployed within 300 yards of their enemy. Then there was some artillery firing, a fusilade or two of musketry, and the charge. The artillery firing and the fusilades were natural enough, but the charge was a burlesque. The slopes of the hill were steep. There was no shelter or cover of any kind; there was a small stream to ford at the foot of the hill; and the distance to be traversed was over 300 yards. The strip of meadow was crossed at a rapid rate, the men shouting and the bugle blowing the charge all along the line. The brook, knee-deep perhaps, seemed to utterly destroy the speed of the assailants, so that the steep slope almost brought them to a standstill. They crawled up the slope, however, and reaching the top in course of time were proclaimed victors.

The idea that the men in the ranks get from such an exercise cannot but be injurious. At a similar incident in 1881, in the south of France, the General remarked, "If there was one bullet in every hundred cartridges they would not advance in that way." The trouble with these sham battles is that the rank and file get false ideas of an assault, and when they first encounter the real thing they become almost paralyzed. It is so terribly different from the sham. One cannot help thinking, then, that sham battles should never be practiced. The manœuvring which brings the army to the assaulting point is valuable, because it is instructive, and cannot be distinguished from the real thing. But a sham assault is worse than the play of Hamlet with the part of Hamlet left out.

The army and navy manœuvres now going on, on the New England coast, in so far as they are manœuvres, are very instructive. It is well to know whether a hostile fleet could escape the vigilance of the scouts and cruisers which could be thrown out along the coast and effect a landing, securing possession of a harbor where troops and supplies could be disembarked. It is not likely that any such attempt will ever be made. Still, the exercise is an excellent one.

The effort to force an entrance into a fortified harbor, which also seems to be part of the program, is so much like some of the assaults in the French army manœuvres that nothing further need be said on the subject. Unless they can find the artillerymen napping, or some friendly enemy has cut the cable communication with the mine field in their favor, they would have no chance. A commander would not be justified in making

the attempt, unless something of vital importance demanded that it should be made at all hazards.

The artillery garrisons, however, and the machinery for operating the system of defense of the position assailed, cannot help being benefitted. Indeed, this part of the combined maneuvers seems to have been devised with that object in view. The artillery machinery of defense is entirely new, and ought to be tested. No matter how familiar an officer may be with it, he will feel much more proficient when he has seen it go.

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THE PROFESSIONAL TRAINING OF ARMY OFFICERS.

The professional training of young army officers is more frequently overdone than neglected. Literary strategists are never content with the grand principles on which the science of war rests. They insist upon teaching the details attending their application, forgetful of the fact that they can rarely be applied twice in the same way. The student officer grasps the details with avidity, and whenever during his professional career an opportunity occurs to apply some strategical principle, he forthwith proceeds to apply it in accordance with the detailed application of the principle taught at the War College. The theater of operations; the strength and character of the enemy; the roads to be traversed; the rivers to be crossed; and a hundred other considerations intervene to modify the application; but the stereotyped methods, practiced by the great masters, and taught at the Staff College, will be followed, unless the officer is a genius. Indeed, nobody but a genius would dare to disregard the instructions which prescribe what should be done in such cases. It is possible, therefore, to teach a young army officer too much. He gets to be proud of his familiarity with his textbook, and will follow it on all occasions to the letter.

And it is the same in tactical instruction. On the fly-leaf of the United States Infantry Drill Regulations is an order, that only the maneuvers prescribed in that manual will be practiced in the army of the United States. The author of that order was so intent upon securing uniformity, that the impossibility of executing some of the maneuvers on peculiar fields escaped his observation. And the consequence was, that during the Rebellion, many volunteer officers did some ridiculous things. The colonel of a regiment was marching his men in column of fours through

a narrow wood road; presently the head of the column cleared the timber and got into an open space of considerable size. Hardly had it done so when a deadly fire was opened on it from the right front. There was an emergency. The drill book prescribed, that being in column of fours, to form line on the first company to fire to the right, the command should be "On right into line, etc." The colonel followed the drill book, and his regiment was swept off the board company after company as they emerged from the woods and tried to come "On the right into line." And that disaster is properly chargeable to the order on the fly-leaf of the drill book.

The German drill book has no such order on the fly-leaf. On the contrary, there is a paragraph in its battalion drill which prescribes that captains should never execute the same movement in the same way twice in succession. There is a heap of sense in that paragraph.

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THE NIGHT APPROACH AND DAYBREAK ATTACK.

The question how to define a frontal attack on an intrenched line armed with modern rifles has occupied the attention of army officers ever since the improved rifle came into use. If I am not mistaken, one of the methods much favored in England was to approach the position to be assaulted at night, and get as close to it as possible without disturbing the enemy. Then to deliver the assault a few minutes before daybreak. These tactics were successfully practiced at Tel el Kebir. They were also tried in South Africa. At Tel el Kebir they were successful. In South Africa they failed. At Tel el Kebir the approach was over an uninhabited desert. In South Africa the columns were under hostile observation at the start and on the march. Every Dutch man, woman and child in South Africa was an enemy, and it was easy enough for them to carry information to their friends, the belligerent Boers. Consequently every night advance, no matter how carefully executed, was a failure. Instead of surprising the Boers a few minutes before daybreak, they were surprised by them. And then there was a newspaper howl. The average civilian thinks a commanding general knows everything. That he can master the topography of the theater of operations; the strength and disposition of the enemy; the character of the roads, bridges and fords along his line of advance, and a

thousand other items of information essential to success in a day or two. Indeed, some of them think he should know all of these things intuitively.

The night approach, as the proper preliminary to a daybreak assault, was well thought of in England, and was probably taught in their schools and practiced at Aldershot for years. Could they not point to Tel el Kebir as an example to be followed? The newspaper men thought it was easy and that anybody could do it. When it failed in South Africa, therefore, they blamed the officer in command.

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WOMEN AS SPIES.

Crossing the danger zone under cover of darkness, if the enemy will permit it, is not an absurd movement, as some sapient newspapers would have one believe. There are circumstances in which it can be profitably resorted to, and if it had not been for the hostile friends, who were permitted to prowl around the camps, the Boers would have been a case in point. Guard duty was carelessly done by them, as it is by all irregular troops, and as a rule they had no outposts or regular patrols to detect the presence of an enemy at a mile from their bivouacs. Still, every time an effort was made to surprise them, they were found ready and expecting the attack. They seemed to know exactly when and where it was to be made, and the only possible explanation is that they were advised of the movement by some of their friends, whose non-combatant character gave them many opportunities to pick up valuable information in a British camp. Women are the most dangerous spies in a country like South Africa. They are at home on horseback and know all the highways and byways in the vicinity. Then their ready wit can always explain their actions if they get caught. The soft-headed officer into whose hands they happen to fall believes them, pities them, and probably escorts them past the picket posts, and bids them Godspeed. It was a long time during our Civil War before we found out what magnificent liars ladies could be, and how easy it was for them to bamboozle our most distinguished officers.

But if officers would harden their hearts while on campaign, if they would believe nobody and trust nobody except the men whom they knew, the spy business would be less successful than

it generally is. Why, during our Rebellion a lady of refinement came to the commander of a strong outpost we had at Culpeper, Virginia, and told him, with the big tears chasing each other down her cheeks, that her brother, an officer in the Confederate army, had been terribly wounded in yesterday's engagement. That he was lying in a farmhouse about three miles outside our lines; that he had no medical attendance and no surgical assistance, and unless she could get him home he was bound to die. What she begged for was the loan of an ambulance to bring him in. She lived close by, and was well known to most of our officers, and so she got the ambulance.

It was never known with certainty whether she had a brother wounded or not. One thing, however, was quite certain. The Confederacy was one ambulance with a span of splendid mules ahead, and the driver, a Yankee soldier, was a prisoner of war. The lady, it was said, rode to Richmond in the ambulance, and then turned the outfit over to the Confederate authorities. A lesson like that makes an officer proficient in outpost duty.

Then nobody but a master liar should be employed as a scout. Suppose he is out in the country "looking around," and stopping at a house of some pretensions finds himself among friends. He is hospitably entertained, and waited on by a fascinating young lady perhaps, who cannot see how anyone can face the hardships and dangers of a scout. Now, where do you sleep at night? Where did you sleep last night? and so on, until, if he is soft, she has found out whence he came and where he was going, and how he would ever get back to the column again. Perhaps it would move and he would be lost. And so on. Now the man who can tell such an inquisitor artistic lies—lies that completely deceive her, and will mistify the enemy to whom she will report them verbatim—is a spy worth having, and a scout that may be depended on.



A HOLLOW-HANDLED INTRENCHING TOOL FOR INFANTRY.*

TRANSLATED BY LIEUT. HARRY H. BISSELL, NINETEENTH INFANTRY.



THIS tool consists of a combination pick and shovel, joined by a special "T"-shaped piece, whose ends can be fitted into a hollow metal handle by the operator. The connection with the handle is made secure by a special device, similar to that of the old socket bayonet.

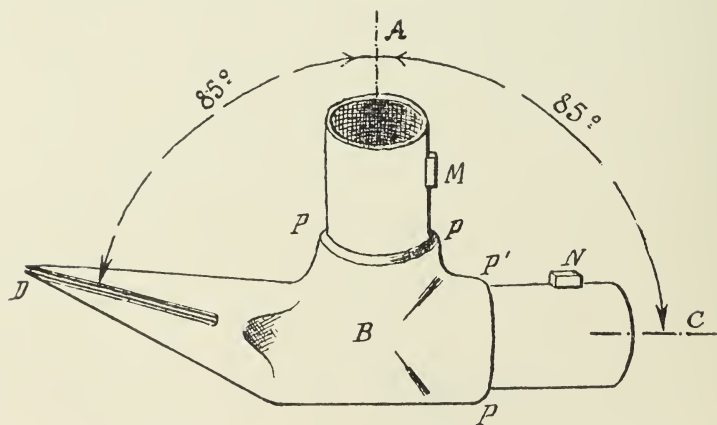
DESCRIPTION OF THE TOOL.

In order to give a clear description of the tool, it will be best to describe in detail each of its component parts.

A.—The body of the tool consists of, 1st, the assembling piece; 2d, the pick; 3d, the shovel.

B.—The handle consists of, 1st, the handle proper; 2d, the ring; 3d, the ferrule; 4th, the stopper.

A.—(1) The assembling piece is formed by the junction of the two tubes AB and BC (shown in the sketch). The tubes

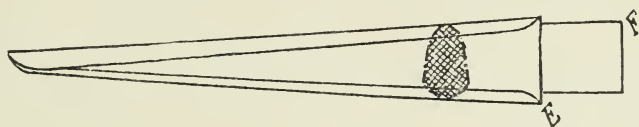


are, when joined, almost perpendicular to each other, the angle between them being 85 degrees. To the tube BC is attached a metal piece, shaped like a spear head, and which, split along the line BD, forms a sort of jaw, into which a steel shovel may be

*From *Le Spectateur Militaire*.

fastened by rivets. The base of the pick is brazed into the other end of the tube BC and secured by a pin. Each of the tubes, AB and BC, has a small rectangular tenon, that serves as a catch for the handle, and each also has a shoulder, PP' and PP, to prevent the handle from going too far in. The shape and the appearance of the assembling piece are shown in the sketch.

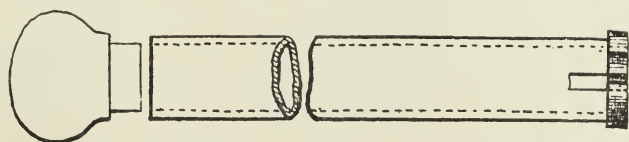
The assembling piece is made of malleable iron, of the same quality that is employed in the manufacture of bicycle tubes and crank hangers, and is plenty strong enough for the purpose for



which it is intended. As, however, it is not hard enough to be made into picks, the latter are made of forged steel. It would have been better to have manufactured the assembling piece and the pick of a single piece of cast steel, but not a single manufacturer was able to guarantee that the thickness of the two tubes would be uniform throughout.

2.—The Pick.—The pick, of forged steel, is shown in the drawing. The base, EF, fits into the tube EC of the assembling piece and is held solidly in place by brazing and a pin.

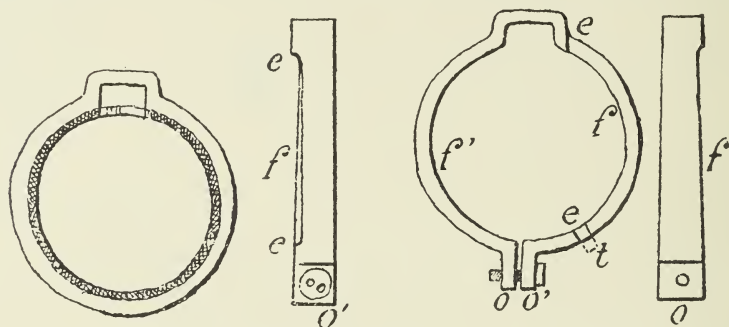
The cutting edge of the pick is on the interior concavity of the tool and is so placed that it prolongs the surface of the tube that passes under the middle of the securing tenon, so that the cutting edge of the tool coincides, for almost its entire length, with the interior of the hollow handle which covers it and the tube BC as well, whenever the tool is used as a shovel. This juxtaposition tends to prevent the handle from bending under the weight of the shovelfuls of dirt, and lessens the strain at the junction of the handle with the tool proper.



3. The Shovel.—The steel shovel is as shown in the sketch. It fits into the jaws of the spear-pointed end of the assembling piece, to which it is fastened by strong rivets.

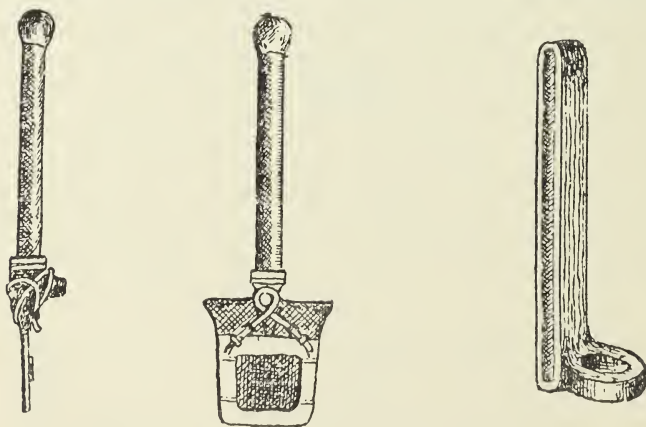
B. 1. The Handle.—The handle, properly speaking, is made of drawn steel; it is hollow and is as shown in the sketch. Its interior diameter exactly coincides with the exterior diameters of the tubes of the assembling piece. The section of the handle that fits over these tubes is slit in order to permit the use of adjusting tenons. The upper end of the handle is closed by a hardwood stopper.

2. The Ring.—The circular ring is brazed upon the lower part of the handle. It is fitted with a junction piece large enough



to permit of the passage of the adjusting tenons, this junction piece being placed exactly over the slit in the handle.

3. The Ferrule.—Like the ring, the ferrule is furnished with a junction piece. It is placed on the handle behind the



ring and can turn freely on it. It is held in front by the ring and in rear by a pawl, which limits its rotation.

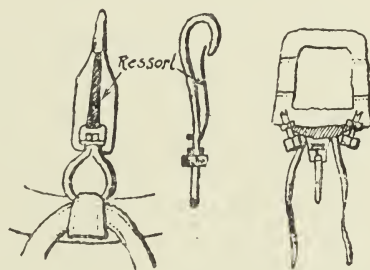
The bands composing the ferrule on each side of the junction piece are not alike; that on the left, "f," has its sides paral-

lel between the projections "e, e." It is on this part that the friction of the pawl comes. The band on the right, "f," is in the shape of a wedge, thus strengthening the attaching device.

The ferrule has two ears, "o" and "o'," connected by a screw, whose head is not cleft, but furnished with two holes, thus, to a great extent, removing the temptation to take it apart. The bands of the ferrules are thus joined in order that the ferrule may be removed for repairs or to make adjustments.

4. The Stopper.—Is of hard wood, nearly spherical in shape, its diameter being greater than that of the handle. It thus allows the workman to lean heavily upon it when the tool is being used as a shovel and also permits of a firm grasp upon it for the heavy strokes necessary in its use as a pick.

Method of Carrying the Tool-Case.—The tool is carried in a drab leather case suspended from the belt or fastened to the



haversack. It is fastened to the tool by two small straps, which buckle together after being wound around the tube of the assembling piece.

The tool is carried on the haversack in the same manner as the combination spade-shovel.

A span hook, the base of which is fastened to the case, enables the tool to be carried suspended from the belt, which is provided for this purpose with a special pattern slide. This slide has somewhat the same form as that of a non-commissioned officer's belt, the lower end, however, being bent at right angles to the upper part, thus forming a ring for the catch of the snap hook.

Changing the Handle.—Changing the handle is a matter of only some 10 or 12 seconds, even for the least skillful man. The only precaution to take before changing is to see that the junction pieces of the ring and the ferrule are opposite each

other. This is done automatically by pushing the junction piece of the ferrule to the right until its movement is stopped by the pawl.

Foreign substances, such as earth, sand, dust, etc., that may get on the tool during work do not, in the slightest degree, interfere with taking it apart, as they can only enter under the junction piece of the ferrule, and when the latter is turned they are displaced by the tenon when the handle is being withdrawn. The diameter of the handle is sufficiently large to permit the finger to remove any dirt that may get into it when the tool is not assembled.

During the experiments that were made with the tool, no trouble of this sort was encountered. One of the tools was even left for several days without cleaning, after working in damp soil and then being completely immersed in water. Naturally much rust formed, which rendered the dismounting of the tool a little difficult, but in no wise prevented it.

The Tool Being Assembled as a Shovel, to Assemble it as a Pick.—Hold the handle in the right hand, the free tube of the assembling up. Place the left hand under the piece to be removed, seizing the ferrule by the ears and with the index finger bent and resting the thumb on the left side of the stud. Turn the ferrule from left to right until its lower shoulder is stopped by the pawl. Draw the handle back (in case of resistance, strike several light sharp blows on either side of the ferrule alternately), the body of the tool resting in the left hand. Hold the body of the tool, with the left hand, by the pick, the shovel on top, and be sure that the junction piece of the ferrule is opposite that of the ring. Shove the handle into the tube as far as it will go. Turn the ferrule from right to left with the right hand and see that the junction is tight.

To change from pick to shovel, reverse the process.

Weight.—The weights of the different parts of the tool are as follows:

Body of tool.....	Kg. 0.780
Handle complete .....	.275
Case .....	.130
Complete with case.....	Kg. 1.185

The average weight of the two tools now in use is Kg. 1.250 and of the proposed one Kg. .055 (without the case), a saving of 1.95 grams.

REMARKS.

1st. The experiments that have recently been made with the shovel-pick with a view to its utility call forth the following observations :

While working in the prone position the operators kept the tool assembled as a pick. After having loosened the earth to a certain depth, they remained reclining on the left side, grasping the blade of the pick with the right hand and the handle with the left, thus making use of both parts as handles, which was of great assistance to them, especially when working in clayey or heavy soil. While in this reclining position they also assembled their shovels and broke up the heavy clods with little effort, finally throwing up the shovels-ful with the right hand alone.

2d. The tool cannot be adapted to every emergency that is apt to arise in the course of a campaign; especially it cannot take the place of the saw, the hatchet, the billhook and the wire cutters, which are always necessary.

Nevertheless, by using in its manufacture an especially good grade of metal, one could, by tempering one of the edges of the shovel, obtain a sort of hatchet that could be used in splitting wood and cutting wires. In a similar manner the other edge could be equipped with saw teeth and, to a certain extent, used as a saw.

It is to be feared, however, that any attempt to adapt the tool to too many uses would result in losing sight of its principal employment, so it would probably be best not to insist on this point.

Conclusion.—In searching for a tool that will enable the isolated infantryman, during a combat, to construct a shelter for himself rapidly, even under fire, and by his own unaided efforts, two conditions are essential :

1st. The tool must have great power as a pick.

2d. It must also be a fairly efficient shovel.

In spite of the fact that these two qualities are not of equal importance, the second must not be neglected in search of the first. In using the shovel in soil already loosened, an increase of activity will, to a certain extent, make up for the small amount of earth removed in each shovelful. But when, on the contrary, it becomes necessary to loosen earth by the blows of a pick, it is imperative that the workman should have at his disposal a tool strong enough to strike a heavy blow and at the

same time tear up the soil after the blow has been struck and the pick is being used as a lever. Without these qualities the workman, however hardened his muscles may be, would soon expend his energy, especially when working in a reclining position.

This shovel-pick, submitted for trial to the permanent General Technical Board for Infantry and Engineers, has been constructed in such a manner as to fulfil the two prime requirements, already mentioned, and it seems, moreover, to be as light and compact as possible.

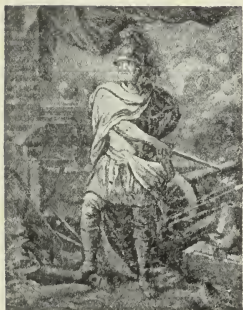
It is far from our idea to regard this toil as absolutely perfect; but it is also true that, such as it is, it is a distinct and positive step towards the desired end—the relief of the infantryman and the lightening of his load as well as his work.

In conclusion, it may be said that the patient researches of Captain Guicheux have produced a result that redounds greatly to his credit.



THE MORAL EQUIVALENT OF WAR.*

By WILLIAM JAMES.



THE war against war is going to be no holiday excursion or camping party. The military feelings are too deeply grounded to abdicate their place among our ideals until better substitutes are offered than the glory and shame that come to nations as well as to individuals from the ups and downs of politics and the vicissitudes of trade. There is something highly paradoxical in the modern man's relation to war.

Ask all our millions, north and south, whether they would vote now (were such a thing possible) to have our war for the Union expunged from history, and the record of a peaceful transition to the present time substituted for that of its marches and battles, and probably hardly a handful of eccentrics would say yes. Those ancestors, those efforts, those memories and legends, are the most ideal part of what we now own together, a sacred spiritual possession worth more than all the blood poured out. Yet ask those same people whether they would be willing in cold blood to start another civil war now to gain another similar possession, and not one man or woman would vote for the proposition. In modern eyes, precious though wars may be, they must not be waged solely for the sake of the ideal harvest. Only when forced upon one, only when an enemy's injustice leaves us no alternative, is war now thought permissible.

It was not thus in ancient times. The earlier men were hunting men, and to hunt a neighboring tribe, kill the males, loot the villages and possess the females, was the most profitable, as well as the most exciting, way of living. Thus were the more martial tribes selected, and in chiefs and peoples a pure pugnacity and love of glory came to mingle with the more fundamental appetite for plunder.

*This article, published last February by the American Association for International Conciliation, was reprinted in *The Popular Science Monthly* as a tribute to the memory of William James, and is here reproduced as an unusually intelligent and impartial review of the subjects of which it treats. [Ed.]

Modern war is so expensive that we feel trade to be a better avenue to plunder; but modern man inherits all the innate pugnacity and all the love of glory of his ancestors. Showing war's irrationality and horror is of no effect upon him. The horrors make the fascination. War is the *strong* life; it is life *in extremis*; war-taxes are the only ones men never hesitate to pay; as the budgets of all nations show us.

History is a bath of blood. The Iliad is one long recital of how Diomedes and Ajax, Sarpedon and Hector *killed*. No detail of the wounds they made is spared us, and the Greek mind fed upon the story. Greek history is a panorama of jingoism and imperialism—war for war's sake, all the citizens being warriors. It is horrible reading, because of the irrationality of it all—save for the purpose of making "history"—and the history is that of the utter ruin of a civilization in intellectual respects perhaps the highest the earth has ever seen.

Those wars were purely piratical. Pride, gold, women, slaves, excitement, were their only motives. In the Peloponnesian war, for example, the Athenians ask the inhabitants of Melos (the island where the "Venus of Milo" was found), hitherto neutral, to own their lordship. The envoys meet, and hold a debate which Thucydides gives in full, and which, for sweet reasonableness of form, would have satisfied Matthew Arnold. "The powerful exact what they can," said the Athenians, "and the weak grant what they must." When the Meleans say that sooner than be slaves they will appeal to the gods, the Athenians reply: "Of the gods we believe and of men we know that, by a law of their nature, wherever they can rule they will. This law was not made by us, and we are not the first to have acted upon it; we did but inherit it, and we know that you and all mankind, if you were as strong as we are, would do as we do. So much for the gods; we have told you why we expect to stand as high in their good opinion as you." Well, the Meleans still refused, and their town was taken. "The Athenians," Thucydides quietly says, "thereupon put to death all who were of military age and made slaves of the women and children. They then colonized the island, sending thither five hundred settlers of their own."

Alexander's career was piracy pure and simple, nothing but an orgy of power and plunder, made romantic by the character of the hero. There was no rational principle in it, and the moment he died his generals and governors attacked one another.

The cruelty of those times is incredible. When Rome finally conquered Greece, Paulus Æmilius was told by the Roman Senate to reward his soldiers for their toil by "giving" them the old kingdom of Epirus. They sacked seventy cities and carried off a hundred and fifty thousand inhabitants as slaves. How many they killed I know not; but in Etolia they killed all the senators, five hundred and fifty in number. Brutus was "the noblest Roman of them all," but to reanimate his soldiers on the eve of Philippi he similarly promises to give them the cities of Sparta and Thessalonica to ravage, if they win the fight.

Such was the gory nurse that trained societies to cohesiveness. We inherit the warlike type; and for most of the capacities of heroism that the human race is full of we have to thank this cruel history. Dead men tell no tales, and if there were any tribes of other type than this they have left no survivors. Our ancestors have bred pugnacity into our bone and marrow, and thousands of years of peace won't breed it out of us. The popular imagination fairly fattens on the thought of wars. Let public opinion once reach a certain fighting pitch, and no ruler can withstand it. In the Boer War both governments began with bluff, but couldn't stay there, the military tension was too much for them. In 1898 our people had read the word WAR in letters three inches high for three months in every newspaper. The pliant politician McKinley was swept away by their eagerness, and our squalid war with Spain became a necessity.

At the present day, civilized opinion is a curious mental mixture. The military instincts and ideals are as strong as ever, but are confronted by reflective criticisms which sorely curb their ancient freedom. Innumerable writers are showing up the bestial side of military service. Pure loot and mastery seem no longer morally avowable motives, and pretexts must be found for attributing them solely to the enemy. England and we, our army and navy authorities repeat without ceasing, arm solely for "peace," Germany and Japan it is who are bent on loot and glory. "Peace" in military mouths to-day is a synonym for "war expected." The word has become a pure provocative, and no government wishing peace sincerely should allow it ever to be printed in a newspaper. Every up-to-date dictionary should say that "peace" and "war" mean the same thing, now *in posse*, now *in actu*. It may even reasonably be said that the intensely sharp competitive *preparation* for war by the nations is the *real war*, permanent, unceasing; and that the battles are only a sort

of public verification of the mastery gained during the "peace"-interval.

It is plain that on this subject civilized man has developed a sort of double personality. If we take European nations, no legitimate interest of any one of them would seem to justify the tremendous destructions which a war to compass it would necessarily entail. It would seem as though common sense and reason ought to find a way to reach agreement in every conflict of honest interests. I myself think it our bounden duty to believe in such international rationality as possible. But, as things stand, I see how desperately hard it is to bring the peace-party and the war-party together, and I believe that the difficulty is due to certain deficiencies in the program of pacificism which set the militarist imagination strongly, and to a certain extent justifiably, against it. In the whole discussion both sides are on imaginative and sentimental ground. It is but one utopia against another, and everything one says must be abstract and hypothetical. Subject to this criticism and caution, I will try to characterize in abstract strokes the opposite imaginative forces, and point out what to my own very fallible mind seems the best utopian hypothesis, the most promising line of conciliation.

In my remarks, pacifist though I am, I will refuse to speak of the bestial side of the war-régime (already done justice to by many writers) and consider only the higher aspects of militaristic sentiment. Patriotism no one thinks discreditable; nor does any one deny that war is the romance of history. But inordinate ambitions are the soul of every patriotism, and the possibility of violent death the soul of all romance. The militarily patriotic and romantic-minded everywhere, and especially the professional military class, refuse to admit for a moment that war may be a transitory phenomena in social evolution. The notion of a sheep's paradise like that revolts, they say, our higher imagination. Where then would be the steeps of life? If war had ever stopped, we should have to re-invent it, on this view, to redeem life from flat degeneration.

Reflective apologists for war at the present day all take it religiously. It is a sort of sacrament. Its profits are to the vanquished as well as to the victor; and quite apart from any question of profit, it is an absolute good, we are told, for it is human nature at its highest dynamic. Its "horrors" are a cheap price to pay for rescue from the only alternative supposed, of a world

of clerks and teachers, of co-education and zoophily, of "consumer's leagues" and "associated charities," of industrialism unlimited, and feminism unabashed. No scorn, no hardness, no valor any more! Fie upon such a cattleyard of a planet!

So far as the central essence of this feeling goes, no healthy minded person, it seems to me, can help to some degree partaking of it. Militarism is the great preserver of our ideals of hardihood, and human life with no use for hardihood would be contemptible. Without risks or prizes for the darer, history would be insipid indeed; and there is a type of military character which every one feels that the race should never cease to breed, for every one is sensitive to its superiority. The duty is incumbent on mankind, of keeping military characters in stock—of keeping them, if not for use, then as ends in themselves and as pure pieces of perfection—so that Roosevelt's weaklings and mollycoddles may not end by making everything else disappear from the face of nature.

This natural sort of feeling forms, I think, the innermost soul of army-writings. Without any exception known to me, militarist authors take a highly mystical view of their subject, and regard war as a biological or sociological necessity, uncontrolled by ordinary psychological checks and motives. When the time of development is ripe the war must come, reason or no reason, for the justifications pleaded are invariably fictitious. War is, in short, a permanent human *obligation*. General Homer Lea, in his recent book "The Valor of Ignorance," plants himself squarely on this ground. Readiness for war is for him the essence of nationality, and ability in it the supreme measure of the health of nations.

Nations, General Lea says, are never stationary—they must necessarily expand or shrink, according to their vitality or decrepitude. Japan now is culminating; and by the fatal law in question it is impossible that her statesmen should not long since have entered, with extraordinary foresight, upon a vast policy of conquest—the game in which the first moves were her wars with China and Russia and her treaty with England, and of which the final objective is the capture of the Philippines, the Hawaiian Islands, Alaska and the whole of our coast west of the Sierra passes. This will give Japan what her ineluctable vocation as a state absolutely forces her to claim, the possession of the entire Pacific Ocean; and to oppose these deep designs we Americans have, according to our author, nothing but our con-

ceit, our ignorance, our commercialism, our corruption, and our feminism. General Lea makes a minute technical comparison of the military strength which we at present could oppose to the strength of Japan, and concludes that the islands, Alaska, Oregon and southern California, would fall almost without resistance, that San Francisco must surrender in a fortnight to a Japanese investment, that in three or four months the war would be over, and our republic, unable to regain what it had heedlessly neglected to protect sufficiently, would then "disintegrate," until perhaps some Cæsar should arise to weld us again into a nation.

A dismal forecast indeed! Yet not unplausible, if the mentality of Japan's statesmen be of the Cæsarian type of which history shows so many examples, and which is all that General Lea seems able to imagine. But there is no reason to think that women can no longer be the mothers of Napoleonic or Alexandrian characters; and if these come in Japan and find their opportunity, just such surprises as "The Valor of Ignorance" paints may lurk in ambush for us. Ignorant as we still are of the innermost recesses of Japanese mentality, we may be foolhardy to disregard such possibilities.

Other militarists are more complex and more moral in their considerations. The "*Philosophie des Kriegen*," by S. R. Steinmetz is a good example. War, according to this author, is an ordeal instituted by God, who weighs the nations in its balance. It is the essential form of the state, and the only function in which peoples can employ all their powers at once and convergently. No victory is possible save as the resultant of a totality of virtues, no defeat for which some vice or weakness is not responsible. Fidelity, cohesiveness, tenacity, heroism, conscience, education, inventiveness, economy, wealth, physical health and vigor—there isn't a moral or intellectual point of superiority that doesn't tell, when God holds his assizes and hurls the peoples upon one another. *Die Weltgeschichte ist das Weltgericht*; and Dr. Steinmetz does not believe that in the long run chance and luck play any part in apportioning the issues.

The virtues that prevail, it must be noted, are virtues anyhow, superiorities that count in peaceful as well as in military competition; but the strain on them, being infinitely intenser in the latter case, makes war infinitely more searching as a trial. No ordeal is comparable to its winnowings. Its dread hammer

is the welder of men into cohesive states, and nowhere but in such states can human nature adequately develop its capacity. The only alternative is "degeneration."

Dr. Steinmetz is a conscientious thinker, and his book, short as it is, takes much into account. Its upshot can, it seems to me, be summed up in Simon Patten's word, that mankind was nursed in pain and fear, and that the transition to a "pleasure-economy" may be fatal to a being wielding no powers of defense against its disintegrative influences. If we speak of the *fear of emancipation from the fear-régime*, we put the whole situation into a single phrase; fear regarding ourselves now taking the place of the ancient fear of the enemy.

Turn the fear over as I will in my mind, it all seems to lead back to two unwillingnesses of the imagination, one esthetic, and the other moral: unwillingness, first to envisage a future in which army-life, with its many elements of charm, shall be forever impossible, and in which the destinies of peoples shall nevermore be decided quickly, thrillingly and tragically, by force, but only gradually and insipidly by "evolution"; and, secondly, unwillingness to see the supreme theater of human strenuousness closed, and the splendid military aptitudes of men doomed to keep always in a state of latency and never show themselves in action. These insistent unwillingnesses, no less than other esthetic and ethical insisencies have, it seems to me, to be listened to and respected. One can not meet them effectively by mere counter-insistency on war's expensiveness and horror. The horror makes the thrill; and when the question is of getting the extremest and supremest out of human nature, talk of expense sounds ignominious. The weakness of so much merely negative criticism is evident—pacifism makes no converts from the military party. The military party denies neither the bestiality nor the horror, nor the expense; it only says that these things tell but half the story. It only says that war is *worth* them; that, taking human nature as a whole, its wars are its best protection against its weaker and more cowardly self, and that mankind can not *afford* to adopt a peace-economy.

Pacifists ought to enter more deeply into the esthetical and ethical point of view of their opponents. Do that first in any controversy, says J. J. Chapman, *then move the point*, and your opponent will follow. So long as anti-militarists propose no substitute for war's disciplinary function, no *moral equivalent* of war, analogous, as one might say, to the mechanical equiva-

lent of heat, so long they fail to realize the full inwardness of the situation. And as a rule they do fail. The duties, penalties and sanctions pictured in the utopias they paint are all too weak and tame to touch the military-minded. Tolstoy's pacifism is the only exception to this rule, for it is profoundly pessimistic as regards all this world's values, and makes the fear of the Lord furnish the moral spur provided elsewhere by the fear of the enemy. But our socialistic peace-advocates all believe absolutely in this world's values; and instead of the fear of the Lord and the fear of the enemy, the only fear they reckon with is the fear of poverty if one be lazy. This weakness pervades all the socialistic literature with which I am acquainted. Even in Lowes Dickinson's exquisite dialogue,* high wages and short hours are the only forces invoked for overcoming man's distaste for repulsive kinds of labor. Meanwhile men at large still live as they always have lived, under a pain-and-fear economy—for those of us who lived in an ease-economy are but an island in the stormy ocean—and the whole atmosphere of present-day utopian literature tastes mawkish and dishwatery to people who still keep a sense for life's more bitter flavors. It suggests, in truth, ubiquitous inferiority.

Inferiority is always with us, and merciless scorn of it is the keynote of the military temper. "Dogs, would you live forever?" shouted Frederick the Great. "Yes," say our utopians, "let us live forever, and raise our level gradually." The best thing about our "inferiors" to-day is that they are as tough as nails, and physically and morally almost as insensitive. Utopianism would see them soft and squeamish, while militarism would keep their callousness, but transfigure it into a meritorious characteristic, needed by "the service," and redeemed by that from the suspicion of inferiority. All the qualities of a man acquire dignity when he knows that the service of the collectivity that owns him needs them. If proud of the collectivity, his own pride rises in proportion. No collectivity is like an army for nourishing such pride; but it has to be confessed that the only sentiment which the image of pacific cosmopolitan industrialism is capable of arousing in countless worthy breasts is shame at the idea of belonging to *such* a collectivity. It is obvious that the United States of America as they exist to-day impress a mind like General Lea's as so much human blubber. Where is the sharpness and precipitousness, the contempt for life, whether

* *Justice and Liberty*, New York, 1909.

one's own, or another's? Where is the savage "yes" and "no," the unconditional duty? Where is the conscription? Where is the blood-tax? Where is anything that one feels honored by belonging to?

Having said thus much in preparation, I will now confess my own utopia. I devoutly believe in the reign of peace and in the gradual advent of some sort of a socialistic equilibrium. The fatalistic view of the war-function is to me nonsense, for I know that war-making is due to definite motives and subject to prudential checks and reasonable criticisms, just like any other form of enterprise. And when whole nations are the armies, and the science of destruction vies in intellectual refinement with the sciences of production, I see that war becomes absurd and impossible from its own monstrosity. Extravagant ambitions will have to be replaced by reasonable claims, and nations must make common cause against them. I see no reason why all this should not apply to yellow as well as to white countries, and I look forward to a future when acts of war shall be formally outlawed as between civilized peoples.

All these beliefs of mine put me squarely into the anti-militarist party. But I do not believe that peace either ought to be or will be permanent on this globe, unless the states pacifically organized preserve some of the old elements of army-discipline. A permanently successful peace-economy can not be a simple pleasure-economy. In the more or less socialistic future towards which mankind seems drifting we must still subject ourselves collectively to those severities which answer to our real position upon this only partly hospitable globe. We must make new energies and hardihoods continue the manliness to which the military mind so faithfully clings. Martial virtues must be the enduring cement; intrepidity, contempt of softness, surrender of private interest, obedience to command, must still remain the rock upon which states are built—unless, indeed, we wish for dangerous reactions against commonwealths fit only for contempt, and liable to invite attack whenever a center of crystallization for military-minded enterprise gets formed anywhere in their neighborhood.

The war-party is assuredly right in affirming and reaffirming that the martial virtues, although originally gained by the race through war, are absolute and permanent human goods. Patriotic pride and ambition in their military form are, after all, only specifications of a more general competitive passion.

They are its first form, but that is no reason for supposing them to be its last form. Men now are proud of belonging to a conquering nation, and without a murmur they lay down their persons and their wealth, if by so doing they may fend off subjection. But who can be sure that *other aspects of one's country* may not, with time and education and suggestion enough, come to be regarded with similarly effective feelings of pride and shame? Why should men not some day feel that it is worth a blood-tax to belong to a collectivity superior in *any* respect? Why should they not blush with indignant shame if the community that owns them is vile in any way whatsoever? Individuals, daily more numerous, now feel this civic passion. It is only a question of blowing on the spark till the whole population gets incandescent, and on the ruins of the old morals of military honor, a stable system of morals of civic honor builds itself up. What the whole community comes to believe in grasps the individual as in a vise. The war-function has grasped us so far; but constructive interests may some day seem no less imperative, and impose on the individual a hardly lighter burden.

Let me illustrate my idea more concretely. There is nothing to make one indignant in the mere fact that life is hard, that men should toil and suffer pain. The planetary conditions once for all are such, and we can stand it. But that so many men, by mere accidents of birth and opportunity, should have a life of *nothing else* but toil and pain and hardness and inferiority imposed upon them, should have *no* vacation, while others natively no more deserving never get any taste of this campaigning life at all—*this* is capable of arousing indignation in reflective minds. It may end by seeming shameful to all of us that some of us have nothing but campaigning, and others nothing but unmanly ease. If now—and this is my idea—there were, instead of military conscription a conscription of the whole youthful population to form for a certain number of years a part of the army enlisted against *nature*, the injustice would tend to be evened out, and numerous other goods to the commonwealth would follow. The military ideals of hardihood and discipline would be wrought into the growing fiber of the people; no one would remain blind as the luxurious classes now are blind, to man's real relations to the globe he lives on, and to the permanently sour and hard foundations of his higher life. To coal and iron mines, to freight trains, to fishing fleets in December, to dishwashing, clothes-washing and window-wash-

ing, to road-building and tunnel-making, to foundries and stoke-holes, and to the frames of skyscrapers, would our gilded youths be drafted off, according to their choice, to get the childishness knocked out of them, and to come back into society with healthier sympathies and soberer ideas. They would have paid their blood-tax, done their own part in the immemorial human warfare against nature, they would tread the earth more proudly, the women would value them more highly, they would be better fathers and teachers of the following generation.

Such a conscription with the state of public opinion that would have required it, and the many moral fruits it would bear, would preserve in the midst of a pacific civilization the manly virtues which the military party is so afraid of seeing disappear in peace. We should get toughness without callousness, authority with as little criminal cruelty as possible, and painful work done cheerily because the duty is temporary, and threatens not, as now, to degrade the whole remainder of one's life. I spoke of the "moral equivalent" of war. So far, war has been the only force that can discipline a whole community, and until an equivalent discipline is organized, I believe that war must have its way. But I have no serious doubt that the ordinary prides and shames of social man, once developed to a certain intensity, are capable of organizing such a moral equivalent as I have sketched, or some other just as effective for preserving manliness of type. It is but a question of time, of skillful propaganda, and of opinion-making men seizing historic opportunities.

The martial type of character can be bred without war. Strenuous honor and disinterestedness abound elsewhere. Priests and medical men are in a fashion educated to it, and we should all feel some degree of it imperative if we were conscious of our work as an obligatory service to the state. We should be *owned*, as soldiers are by the army, and our pride would rise accordingly. We could be poor, then, without humiliation, as army officers now are. The only thing needed henceforward is to inflame the civic temper as past history has inflamed the military temper. H. G. Wells, as usual, sees the center of the situation. "In many ways," he says, "military organization is the most peaceful of activities. When the contemporary man steps from the street, of clamorous insincere advertisement, push, adulteration, underselling and intermittent employment, into the barrack-yard, he steps on to a higher social plane, into an atmos-

phere of service and co-operation and of infinitely more honorable emulations. Here at least men are not flung out of employment to degenerate because there is no immediate work for them to do. They are fed and drilled and trained for better services. Here at least a man is supposed to win promotion by self-forgetfulness, and not by self-seeking. And beside the feeble and irregular endowment of research by commercialism, its little short-sighted snatches at profit by innovation and scientific economy, see how remarkable is the steady and rapid development of method and appliances in naval and military affairs! Nothing is more striking than to compare the progress of civil conveniences which has been left almost entirely to the trader, to the progress in military apparatus during the last few decades. The house-appliances of to-day, for example, are little better than they were fifty years ago. A house of to-day is still almost as ill-ventilated, badly heated by wasteful fires, clumsily arranged and furnished as the house of 1858. Houses a couple of hundred years old are still satisfactory places of residence, so little have our standards risen. But the rifle or battleship of fifty years ago was beyond all comparison inferior to those we possess; in power, in speed, in convenience alike. No one has a use now for such superannuated things.”*

Wells adds† that he thinks that the conceptions of order and discipline, the tradition of service and devotion, of physical fitness, unstinted exertion and universal responsibility, which universal military duty is now teaching European nations, will remain a permanent acquisition, when the last ammunition has been used in the fireworks that celebrate the final peace. I believe as he does. It would be simply preposterous if the only force that could work ideals of honor and standards of efficiency into English or American natures should be the fear of being killed by the Germans or the Japanese. Great indeed is fear; but it is not, as our military enthusiasts believe and try to make us believe, the only stimulus known for awakening the higher ranges of men's spiritual energy. The amount of alteration in public opinion which my utopia postulates is vastly less than the difference between the mentality of those black warriors who pursued Stanley's party on the Congo with their cannibal war-cry of "meat! meat!" and that of the "general staff" of any civilized nation. History has seen the latter interval bridged over; the former one can be bridged over much more easily.

**First and Last Things*, 1908, p. 215.

†*Ibid.*, p. 226.

A REVIEW OF THE SERVICES OF THE REGULAR ARMY DURING THE CIVIL WAR.*

BY MAJOR JOHN C. WHITE, UNITED STATES ARMY.

III. THE ARTILLERY.



THE other big cavalry combat which took place at Brandy Station, and continued with greater or less fierceness from Aug. 1st to 4th, around Rappahannock Station and Culpeper, whither the Confederate forces were trending, called upon the activities of "K," 1st, and "B"- "L," 2d. There were, likewise, a series of contests, once more, around Brandy Station, from the 12th to 15th Sept., including the fords above Fredericksburg, and Rapidan River, Racoon Ford and Culpeper Station, in which "E"- "G," and "K," 1st; "A," "D" (Williston), "G," (Butler), of the 2d, and "C," 3d (Fuller), participated with credit to themselves.

On the 1st Sept., "C," 3d, had been called upon at Port Royal, and on the next, "E," 4th, under Elder, with Terence Reilly (Army '63), had been similarly engaged at Port Conway. All this was in concert with the three cavalry columns under Pleasanton, which were driving the Confederates back to the Rapidan.

From the 21st to the 23d, near Madison Courthouse (at Robertson's ford and the Rapidan River), "K," 1st, "A" and "D," 2d, and "C," 3d, were rendering valuable support.

The short respite that ensued as matters had quieted down was dispelled when the Signal Corps discovered Lee's efforts to turn Meade's right and to occupy Centreville; and on 10th and 11th October "B"- "L," and "M," 2d, with "E," 4th, at Morton's ford, and on the latter date sharing with "D," 2d, and again, on the 12th, at Culpeper, those batteries of the 2d aided in defeating his plans in the various collisions that occurred. "A," 4th, operated the same date at Warrenton (Sulphur Springs). In Warren's splendid struggle at Bristoe Station, on the Orange & Alexandria R. R., on the 14th "I," 1st, as well as the two batteries of the 4th that were employed, viz., "A," and "E." Some more of those minor affairs took place at Oak Hill on the 15th, which embraced "B"- "L," Heaton, and "M," Williston, both of the 2d Art.,

*Continued from September number.

receiving Buford's praise; and on the same day at Union Mills for "K," 4th, under James, who had the assistance of a volunteer lieutenant. At Buckland Mills, on the 19th, the artillery was represented by "M," 2d (Pennington), and "E," 4th (Elder, Fitch and Reilly), and from that date to the 25th, "B," 4th (Stewart and Jno. Mitchell, Army '63), was skirmishing around about Haymarket. "I," 1st, so long and honorably associated with the 2d Corps, was detached, mounted and assigned to the cavalry command; its place in that corps being taken by "C," 5th, under Weir. On the 26th October, "B," "L," and "D," 2d, had a bout at Bealton Station. All this while Lee's pertinacious attempts continued, and until the routing of the Confederate force at Rappahannock Station, when Sedgwick's magnificent charge with his own and the 5th Corps, which resulted in the capture of the redoubt on 7th November, Rittenhouse and Martin being invaluable participants, after which the Army of North Virginia was retired behind the Rapidan. In effecting this it brought on collisions, Nov. 8th, with "E," 4th, at Stevensburg, Field and Reilly being its officers, with John Hewett Smith (Army '63), "F," 5th Art., Martin, was disputing the passage of the river; and the same day "D" and "G," 2d, the latter under Dennison, were engaged likewise at Culpeper and Muddy Run. The 15th of the month found "M," 2d, under Pennington, putting in its work at Racoon ford. The picketing of some forty miles of river, as incidental to the situation, continued, until they were once more launched into active operations by the severe Mine Run campaign which rudely dissipated the hopes of a pacific hibernation in their cantonments. The miscarriage of this carefully and skillfully planned movement, through the failure of a subordinate to reach the appointed locality in due time for the combined attack, caused Meade to wisely and humanely countermand his orders and his army returned to winter rendezvous. Numerous skirmishes and scoutings about the fords, Morton's and Racoon, at Locust Grove, New Hope Church, Parker's Store and along the Rapidan generally had required the services of the 1st batteries; "E," "G" (Chester); "H" (Mason); "I" (Randol), and "K" (Jno. Egan). Of the 2d: "A" (Calef); "B," "L" (Heaton); "D" (Williston); "G" (Dennison), and "M" (Pennington): Of the 3d, "C" (Ransom); and "F," "K" (Barstow). Of the 4th, "A" (King and Warner); "B" (Stewart and Mitchell); "C" (Fitzhugh and McGilvray) of the 2d; "E" (Field and Reilly), and "K" (Roder and two volunteer lieutenants); while "C," consolidated temporarily with "I" (Gilliss and Metcalf); "D" (Rittenhouse); "E" (Martin and Watson), and "M" (McKnight), had represented well the 5th Artillery.

The Regular batteries in the far west, as midsummer drew on, had had as an exponent that of "E," 2d, under Benjamin, which had accompanied the movement of Burnside's (9th) Corps under Parke upon Eastern Tennessee after the separation from the A. of P. of that force. At Jackson, Miss., from the 10th to 16th July, it had been very active, but its crowning service was rendered in the gallant defense of Fort Sanders. Later it was attached to Corps Headquarters. Also that of "I," "M," 3d, under Capt. Jno. Edwards, with Lt. Wm. Sinclair, the latter having been but recently mustered out as a Col. of Vols., shortly afterwards receiving assignment as Lt. Col. and A. I. G. Vols.

The terrific conflict at Chickamauga, Tenn., during the 19th and 20th Sept., involved "H," 4th, in catastrophe. Its commander, Harry Cushing, had as his sole assistant Robt. Floyd (Army '63), of the 3d Art., who was mortally wounded, the battery losing a disabled gun (but which was afterwards recovered), and, after nearly all the

horses had been shot, the others had to be abandoned, but also were later rescued by herculean efforts, while covered with honors, from his chief, Mendenhall, and his direct superiors, Hazen and Crittenden, the indomitable young battery commander. Russell, with "M," 4th, and Jno. Gazzam Butler (* '63) shared in the encomiums from the same high officials.

"I," idem, under Frank G. Smith, with Rodney, Stephenson and Nicholas Redmond (Army '63), who was severely wounded, was serving with Brannan's (3d) Corps, under Thomas, while "H," 5th, under Howard Mather Burnham ('61), was with Baird's (1st) Div. in the same (14th) Corps. After Burnham's heroic death, when the battery had been overwhelmed by the masses of the enemy in its furious assault on the right, and Ludlow had been wounded, the command was ably exercised by Fessenden, himself a victim of the shots. The battery was taken and retaken, after having fired 16 rounds of canister, and finally Fessenden brought off the pieces, but without their caissons, which had to be abandoned for lack of horses enough. Thus useless, through its losses in officers and equipment, it was ordered into the town. On the 21st Lt. Fessenden was authorized to rehabilitate a section and proceed to the front, where the chieftain so appropriately styled "the Rock of Chickamauga" directed him to fight his guns wherever he could, which he did in conjunction with Cushing's Battery, when, after aiding in the repulse, they returned to Chattanooga.

Guenther, who had effected his transfer with Kensel, received "special mention" from Sheridan and Sherman.

At Philadelphia, Tenn., Oct. 26th, "L"- "M," 3d, became engaged with the enemy; and, again, at Campbell's Station, Nov. 16th, where it was associated with "E," 2d, being utilized, also, with that battery in the siege of Knoxville, from Nov. 17th to Dec. 5th.

At Chattanooga, Nov. 23d-27th, another fierce fight, in which "G" and "I," 4th, the former under Christopher Fred'k Merkle, with Richard Wilson, of the 3d—both old soldiers, the one commissioned in '62 and the other in '63—were combatants. "I," as before, was under Smith, who had Rodney and John Fitzgerald of the 2d Art. (Army '63) as his subalterns.

During the continuance of the Chattanooga-Ringgold campaign, Nov. 24th-25th, including Missionary Ridge, Fessenden was busily occupied with "H," 5th, Kensel being divisional chief, and Loder, as Lt. Col. Vols., the A. I. G. for Crittenden's (21st) Corps.

The year closed for these batteries with a contention at Blain's Crossroads, for "L"- "M," 3d, Dec. 17th, but hostilities were renewed, however, between the same forces at Strawberry Plains and Armstrong Ferry, on Jan. 21, 1864. Lt. Erskine Gittings (1st cl. * '61), commanded on both these occasions. During the demonstrations upon Dalton, Ga., which included the actions at Tunnel Hill, Buzzard's Roost and Rockyface Ridge or Crow's Valley, "H," 4th, under Cushing, was in co-operation with the Regular infantry and the volunteer troops from Feb. 22d-27th.

The preparations for and the initial movements in the Atlanta campaign afforded these troops some relief from active employment, as well as a much needed opportunity for re-equipment and recruitment. But at Resaca, Ga., from May 13th-15th, there were urgent demands upon "F," 2d, now under Albert M. Murray (* '62), who was captured and died as a prisoner of war. With him were Lts. Joseph Cabell Breckenridge ('62), Lemuel Smith (Army '63) and Rezin Gist Howell (* '64). The battery fought with the Regular infantry brigades, as

again at the engagements near Dallas; while at Kenesaw Mountain, upon various occasions from June 14th to July 3d, its services were constantly required. Again, they were demanded at Neal Dow Station and vicinity, upon "Independence Day," and in the operations about Atlanta from July 20th to August 30th, where it was joined by "K," 5th, under Bainbridge.

At Pulaski, Tenn., "H," 5th, is on record, under Spooner and Fessenden, Sept. 27th, and "M," 4th, under Russell, at Franklin, on the last day of November. Again, at Nashville, Dec. 15th-16th, "M" found itself connected with "I," under Smith still; this latter battery celebrating Christmas Day at Devil's Gap, near Pulaski again.

Capt. Geo. Warren Dresser (*'61), 4th Art., was serving on the staff of W. F. Smith, Army of the Cumberland, Gen. Brannan as Chief of Art. Reserve, with Mendenhall as his assistant.

In the southern field of operations "B," 1st, equipped as a horse-battery, and under command of Elder, who had as lieutenants Theodore Kane Gibbs ('61) and Michael Leahy (Army '63), together with Langdon's "M" (idem), with Robt. M. Hall (Army '61) and Tully McCrea, took part in Gen. Seymour's expedition to Florida in February. "B," on duty with a cavalry brigade, under Guy V. Henry, now the colonel of Mass. mounted infantry, captured a Confederate camp on the 8th, and advancing toward Lake City a reconnaissance discovered at St. Mary's ford, on the 10th, such a numerical superiority of the enemy that the command received orders to withdraw until supported properly by the infantry. With the assistance of "M," it again advanced, when the severe engagement of Olustee on the 20th eventuated with disastrous results to both batteries, as well as to Jno. Hamilton's "C," 3d, with which Myrick and a volunteer lieutenant were serving. In the face of greatly superior numbers, and the overlapping of the Federal left, Hamilton lost 44 men and about as many horses before he had been able to even unlimber or fire a single round, he and his lieutenants being all wounded. Langdon, who had a volunteer detachment added to his battery, had McCrea severely wounded (Hall having been previously detached as A. A. G. of the district), and lost three of his guns through the destruction of his teams. Elder was also a severe sufferer in killed and wounded, Lt. Gibbs among the latter.

A section of the battery, under Lt. Leahy, was again called upon to meet the renewed attacks of the elated enemy, who were following up their advantage, both at Cedar and McGirth's Creeks in the 1st of March; and, again, at the former point, April 3d, where the enemy was vigorously repulsed. Later in the month both these batteries of the 1st Art. were transferred to Virginia, where they were joined by "C" and "D," which were temporarily consolidated under Sanger, Tully and a volunteer lieutenant attached.

"G," 5th, under Rawles, with Craft, had been converted into a horse-battery during the winter at New Orleans, and, with 156 men, had actively participated in the "Red River campaign," during which the entailed and continuous skirmishing credits it with Henderson's Hill, La., March 21st; Crump's Hill (or Corners), April 2d; Wilson's plantation, April 7th. At Sabine Crossroads, the following day, where the Federal forces met with a reversal of the success which had thus far crowned their operations, and on the 9th, at Pleasant Hill, the batteries engaged shared in the heavy losses of the command; "I," 1st, under Taylor (Closson being chief of the 19th Corps Art.), with Appleton and Sanderson, was overrun by the enemy despite the canister which had been poured into their advancing lines, and all efforts to remove

it proved ineffectual; but when the Federals turned the tables on the foe, the guns were retaken intact, but Sanderson had fallen, mortally wounded. Sections of "G," 5th, attached to the cavalry brigades, one under Rawles, the other under Homer Baldwin (who had joined during the siege of Port Hudson) were constantly in action. Upon the final abandonment of the expedition the battery returned to New Orleans, turned in their light battery equipment, proceeded to Mobile Bay, taking part in the siege of Fort Morgan, Aug. 22d; the fort's surrender following the next day. It returned to New Orleans shortly after, and with subsequent changes eventually found itself, by the end of the month, in the Army of the Potomac, and consolidated with "D," Rawles in command, and throughout, to the finale.

"F," 1st, under Haskin (solus), had been also in the "Crescent City" until the end of March, when, finally outfitted as a horse-battery, it was also assigned to the cavalry upon the arrival of the army at Alexandria, La., and was soon actively employed on May 15th at Marksville Prairie, and the next day at the village of Mansura, where it was complimented by Gen. Emory "for the manner in which it had performed its duty."

"A" (idem), under Humphrey, had shared and suffered in the Tech campaign, and had joined in the grand attack upon Port Hudson, May 27th, with "F" (idem), in support, under the directions of Capt. Duryea as Chief of Art., and which, failing of success, resulted in the conversion of operations to those of a regular siege. These three batteries of the 1st were subsequently ordered to Washington, where "A" and "F" served in its defenses until the close of the war; "L," during the fall, joining the Union command in West Virginia.

There were but few demands upon the Regular batteries with the A. of P. during the winter 1863-4; "G," 2d, under Dennison, being called upon, Feb. 6th-7th, at skirmishing while the cavalry was scouting and picketing at Barnett's ford and Robertson's River; while "E"- "G," 1st, with Lts. French and Porter, being actively operating upon Custer's expedition into Albemarle County on the 28th and March 1st.

Upon that latter date, "C," 3d (Kelly), was also at work near Mechanicsville as a consequence of reconnoitering.

But when the army crossed the Rapidan, May 4th, these batteries accompanied it, as also "H"- "I," 1st, now under Randol, who had with him Michalowski and Garvin (Mason joining later), and "K" (idem), under John Egan, with Maynadier and Jacob Henry Counselman and Thomas Ward, both 1863 graduates from the Military Academy, but these last enumerated batteries were not in action until the army had reached the vicinity of Cold Harbor in early June.

Prior to then "E"- "G," 1st, had been engaged, May 21st, at Millford; 23d at Chesterfield; 26th at Polecat Creek; and on June 3d at Sharp's farm, after which, on account of the depletion of its roster, it was sent to Washington, where it continued to serve, as a foot-battery, until after the surrender; its captain, Randol, having become a colonel of volunteers.

The 2d Art. was represented by "B"- "L," under Heaton; "D," Willis-ton; "M," Pennington, Woodruff and Wm. Egan (Army '63), (which had been called upon at Craig's Meetinghouse May 5th), and on the 11th at Yellow Tavern, the next day at Meadow Bridge. The consolidated batteries, "C," "F," "K," of the 3d, were under, at first, Kelly; later Barstow succeeded to the command, while Gittings' "L"- "M," which, with "E," 2d, under Jas. Sam'l Dudley ('60), and "G," 3d, Edmund Pendleton ('61), were in the brigade of artillery with 9th Corps, and under Capt. Jno. Edwards as its chief.

Of the 4th, there were "A," King; "B," Steward; "C"- "E," consolidated as a horse-battery under Fitzhugh; and "K," Roder, with Jno. Hewitt Smith and Thos. Burnes, both promotions from the ranks in the year before.

"D" stood for the 5th Art. Its officers were Rittenhouse, Van Reed, Robt. Catlin (* '63) and John Elliott (* '64), the latter belonging to the 2d Art.

The terrain, covered as it was with such a dense undergrowth, did not permit this branch of the service its proper scope of action. "Hardly a charge took place, either by or on our lines, which was not made through the woods, where artillery could do almost nothing. Concert of action was impracticable, although each corps had been supplemented with about 12 batteries under a colonel. "C"- "I" was also representing the 5th with Hancock's (2d) Corps. It was under Gilliss, with Wm. Butler Beck ('61), formerly a cadet, and Richard Metcalf (Army '63); as was also "M," under McKnight with Sedgwick's (6th) Corps. "E," under Brinckle, was in Col. Burton's Artillery Reserve; and "A," under C. P. Muhlenberg, in the brigade of Brook's (1st) Division, Smith's (18th) Corps; neither of whom appear to have been called upon for any extraordinary exertion. The latter battery had remained near Portsmouth since the siege of Suffolk, and now had just joined the Army of the James. So far as these batteries were concerned, what is known as the "first" or "Wilderness epoch" embraced an engagement for "D," 5th, on the afternoon of the 5th May, but, although in position on the 6th, it was not able to effectually get into action. It closed with skirmishing on the 6th and 7th at Port Walthall Junction, Chester Station and Point of Rocks, by "D," 4th (Thompson and Powell and a volunteer attached), and by "L" (idem) (Hunt, Clous, Stelges (Army '63), and another attached volunteer); while upon the Richmond & Petersburg R. R., on the 7th, there had been further employment for "A," 5th, now under Lt. Bucher, 4th Artillery. The "second" or "Spottsylvania epoch" evolved the services of the same organizations of the 4th Art., a volunteer lieutenant, serving with "B," being mortally wounded on the 8th of May.

"C"- "I," 5th, were also prominently active in the fierce fighting on the 10th, during the attack of the 5th Corps, and again on the 12th, during the bloody charge upon the salient, when the battery itself practically charged the enemy's breastworks, the two guns of Metcalf's section being left with their muzzles projecting over them, at the famous "angle," after they had fired their canister again and again, and had only been abandoned when drivers, cannoniers and horses had fallen to such an extent that only Metcalf and a sergeant (Lines) came out of the carnage where 24 had gone in. Gilliss having been wounded, the command of the battery itself had devolved upon Beck, and its service was handsomely commented upon by Hancock. "D" (idem), in position near the Courthouse on the 9th, got into the fray, along with that same corps the next day; and on the 18th took part in an artillery duel which continued throughout the day; and "M" was hotly engaged on the 12th, having expended 910 rounds, and again on the 21st, when the army moved away from that locality. (In this battle Gen. A. S. Webb, the former much-beloved Inspector-General of the 5th Corps, was severely wounded.) "A" (idem) had been at work, meanwhile, in sharp action at Swift Creek, near Petersburg, and also ably aided in the repulse of the enemy's attack upon the Army of the James, near Drewry's Bluff, the week after.

"D," 4th, under Thompson (Follett being Chief Art. for Weitzel's

(2d) Division), was employed near Petersburg on the 9th. "A," idem, under Fuger, with Howard B. Cushing (Army '63), and "C"-*"F,"* idem, under Fitzhugh, with Field and Reilly, are to be credited with services with Sheridan's (1st) expedition, with which "B"-*"L,"* 2d (Heaton), "D," idem, Williston, and "M," idem, Pennington, Woodruff and Wm. Egan likewise co-operated—the latter having been changed to a 4-gun battery—the right section, of 3-inch guns, under Woodruff, and the left, of 12s, under Wm. Egan, acting independently of each other. "B," 1st, Elder, Gibbs, T. K., and Leahy upon joining from Yorktown, had been called upon in an affair at Proctor's Camp on the 18th. Those batteries with the Army of the James withdrew into their entrenchments at Bermuda Hundred, closely followed by the Confederates, who attacked the works, May 20th-21st, but withdrew after their repulse. "M," 1st, had been in constant demand here during Butler's attempt to advance by McClellan's former route. "L," 4th also, near Petersburg, on the 10th, had been in requisition; and in the advance on Fort Darling, it and its sister battery "D" had been utilized at Swift's Creek on the 11th. "A," at Mechanicsville; "B," at Spottsylvania; "G," at Meadow Bridge; "C"-*"E,"* at Strawberry Hill—all on the 12th—while "I" was aiding in the skirmishes along Proctor's Creek from the 13th to 14th.

"B"-*"L,"* with "D" and "M," 2d, and "A," and "C"-*"E,"* 4th, accompanied Sheridan's (2d) expedition on the 11th and 12th, in which Fitzhugh's command had a narrow escape in the darkness, while with Wilson's column, from capture, through the treachery of a guide who paid the penalty with his life.

The old "West Point Battery" had been again actively employed in the vicinity of the Beverly House on the 13th, while on the 18th it formed one of a group of batteries that maintained a lively duel with those of the foe during the advance of the 2d Corps.

"B," 5th, under Dupont (who was also the chief of artillery in the 19th Corps) when Sigel moved southward as May opened, was strenuously operating at Newmarket at the time of that general's defeat, and where he was, shortly afterwards, superseded by Hunter.

Thompson's "D," 4th, was continually in evidence along the Bermuda Line from May 17th to June 14th.

Port Walthall Junction again required great activity on the part of "E," 3d, under Sanger, 1st Art., from the 19th to 21st in the series of bloody collisions that Mrs. Pryor refers to in her last work.

The "third epoch," constituting the movement to and from the North Anna River, found "B"-*"L,"* 2d, "A," "B" and "K," 4th, and "C," "D" and "I," 5th, energetic factors in that change of direction from the line where Grant had proposed to fight it out all summer. "D," 5th, had been placed in position on the north bank of the stream, under Griffin's personal direction, as his division crossed the ford at Jericho Mills, May 23d, and by the splendid accuracy of the fire from it and the other batteries enabled the troops with which the writer was serving to vigorously repulse the furious attempt to drive us back into the river, and added materially to the fearful slaughter inflicted upon them. (The personal allusion is merely to furnish living testimony to splendid artillery practice.)

Grant's change of movement by withdrawing the 5th Corps during the night of the 26th May, which formed the fourth epoch, together with the operations, both before and after, comprised actions at Pamunkey and Tolopotomy rivers for "C"-*"I,"* 5th, and included Hanovertown for "C"-*"F"-*"K,"* 3d, on the 28th; Haw's Shop 29th, Jericho Bridge, Jones' Farm, Old Church, Salem Church, Atlee's Station,*

Bethesda Church and Ashland for "D," 5th, and "C"-*"F"*-*"K,"* 3d, again. In the various engagements about Cold Harbor from June 1st-12th, besides that at Sharp's Farm for *"E"*-*"G,"* 1st, as noted, Batteries *"B,"* *"H,"* *"I"* and *"K"* were component parts. Captain Elder was chief of the 18th Corps, to which *"B"* had been assigned upon arrival, and as T. K. Gibbs had been detailed to take command of *"A,"* 5th, Leahy was the only officer with *"B."* Beecher was in command of *"L,"* 4th, at this juncture, with Stelges and a volunteer (who was wounded), losing very heavily in men and horses on the 3d. Randol's *"H"*-*"I"* was, at first, attached to Gregg's division of cavalry, and on the 1st Garvin's section was withdrawn after sustaining the unequal conflict for a short time; Michalowski's being in position but not opening fire; *"K"* met with slight losses, but no particulars are on record. On June 6th *"H"*-*"I,"* after various skirmishes, joined Sheridan's column—then organizing for the Trevilian Station raid—while *"K"* moved with the rear-guard towards the James, being engaged at Yellow Tavern on the 11th. In the action at Trevilian Station on the 11th *"H"*-*"I"* was engaged all day in desperate conflict in a dense forest, the battery being maneuvered "by piece" wherever an advantageous position could be secured; towards the close Lieutenant Mason was mortally wounded. Merritt and Rodenbough have recorded their testimony as to the excellent practice of Williston's battery as the station was gained; Pennington, in an advanced position, lost one gun, which was recaptured, however. *"B"* had remained in position until the 10th, when the army moved toward Petersburg. *"C,"* 3d, under Barstow; *"B,"* 4th (Stewart); *"K,"* Roder with Burnes' 5th Artillery and a volunteer lieutenant; *"L"* (Beecher), as noted; as also *"A,"* 5th, Gibbs; *"C"* and *"L"* (Gilliss, with Metcalf and Beck) at Barker's Mill on the 1st, while with Birney's division; and again on the 2d. Gibbs having been severely wounded on the 3d was succeeded by Lieutenant Ludlow, who had just reported from the West. *"D"* (Rittenhouse), *"E"* (Brinckle) and *"M"* (McKnight) were also much in evidence, the two former having materially assisted in repulsing the charge made by the Confederates down the Mechanicsville Road on the 3d and were frequently engaged all through the day; the latter, while under fire, was not actually employed on the 3d, but from the 5th to the 12th was in position on the skirmish line near Cold Harbor, opening fire as opportunity offered. During these operations Merritt passed the highest encomiums on both *"G"* (Dennison) and *"D,"* 2d (Williston), for their assistance in the movements of his cavalry column. *"B,"* 5th (Dupont), with General Hunter, had assisted in the defeat of the enemy at Piedmont, while moving up the valley June 5th.

At White Oak Swamp on the 13th *"C"* and *"E,"* 4th (Fitzhugh, with Fuger and Reilly), were in action, and on the 15th *"B"* (Stewart) was aiding in preventing further attack upon the depot at White House. *"K,"* 1st (Maynadier, with John Egan and Ward), were in a slight skirmish on the evening of the 14th at Seminary (or St. Mary's Church); but were more heavily engaged on the 15th near Charles City C. H. In the attack on Gregg's column at the former place by Hampton's entire corps, Randol and Dennison are credited with saving the wagon train and doing good work. The dilatory movements that had entailed the failure to capture Petersburg, when such was a possibility, now established the army before that town in a quasi siege operation. Consequently the regular batteries were utilized to the fullest extent and in connection with their volunteer compatriots. These comprehended *"B"* (Gibbs), *"D"* (Tully), *"H"*-*"I,"* *"K"* and *"M"* (Langdon), 1st; *"A,"* *"B"*-*"L,"* *"D"* (Williston) and *"M"* (Woodruff), 2d; *"C,"* *"E"* (Myrick),

3d; "B" (Stewart), "C"- "I" (Fitzhugh), "D" (Follett, with Thompson and F. Powell and a volunteer officer), "K" (Roder, Mitchell and Burnes) and "L," 4th; Beecher, with Stelges and Richard Wilson, 3d Art.; and of the 5th Art., "A" (Ludlow), "C"- "I" (Beck), "D" (Rittenhouse), "E" (Brinckle) and "F" (Martin), in July, 1864. "A" and "D," 5th, assisted in capturing the outer works in the initial attack, the former with the 6th, the latter with the 5th corps. Rittenhouse was severely wounded, and Van Reed remained in command of the battery until the consolidation with "G," when Rawles took charge. "C"- "I" had also participated, and was especially effective during A. P. Hill's attack of 22d. It also accompanied Hancock's demonstration across the James at Deep Bottom on the 27th, and was in action until 8 P. M. on the 29th, when it returned to position in front of Petersburg, prior to the explosion of the mine on the 30th, when nearly all our batteries took part. "F" (Martin) joined the 18th Corps early in July and put in much fatiguing service as the lines drew closer together, all having to be on the alert, day and night, as the picket firing and bombardment was continual. An excellent description of this life in the trenches is given in Wise's "End of an Era," as the writer can attest from personal experience throughout, while in support of "D," 5th, with a battalion of 14th Infantry. During Sheridan's Shenandoah Campaign Dupont's "B," 5th, was in continual requisition, and has to its record, in addition to New London, on June 16th, and the Lynchburg skirmishes 17th-18th, Cedar Creek August 12th and Kearneysville 25th, and the more important combats at Winchester (or Opequon) September 19th, co-operating again in the latter part of the month under the same commander.

"L," 5th, under Weir, having just joined Averell in the middle of July, appears in the engagements at Snicker's Gap on the 18th; at Hancock, Md., on the last day of the month; at Mansfield, Va., August 7th; Martinsburg, 31st; at Bunker Hill September 2d, at Winchester 5th, prior to the severer contest there on the 19th which the cavalry waged.

"B"- "L," 2d, had also been briskly engaged on the Martinsburg Pike August 28th. Weir had also accompanied the Sheridan expedition and had proved to be a most valuable adjunct in the pursuit of Early's forces.

But Early turned, like the proverbial worm, after he had been driven from his third position, at Mount Jackson, where "L," 5th, once more had rendered valuable assistance, and having been reinforced in mid-October, planned a surprise for Sheridan's forces in their camp overlooking Cedar Creek. Under cover of a dark night Gordon's troops passed over a narrow and difficult trail around Massanutten Mountain, and having gained the objective position by the aid of a dense fog were able to throw themselves, undetected, upon Crook's men on the left, driving them and the 19th Corps in complete rout until Sheridan's timely arrival rallied the fleeing troops and turned defeat into victory. Dupont's battery, and a volunteer one located with it, occupied a work to the left front of its corps and near the point of first attack. Under this, while harnessing his teams, Lt. Brewerton, in command, turned his guns on the enemy, continuing his fire of canister till they were within a few yards of the muzzles, when, abandoning his limbers, he ran the guns down the hill by hand to the caissons, the limbers of which he utilized in saving five of his pieces. While striving to extricate another which had gotten jammed among the trees, Brewerton was captured, while his only assistant, Sam'l Davis Southworth (Army '64), of the 2d Art., was killed. Finally, the 1st sergt., J. A. Webb, succeeded in removing the guns and rejoining the command, where it was refitted, and did most admirable execution till dark under Chas.

Holman (Army '62), who had just joined. Dupont, Brewerton and the brave sergeant received "particular mention" from Crook. McKnight's "M" first went into action just in front of its own camp, where its lieutenant, Fred'k Robinson (Army '62), was wounded, and one gun was lost in the retirement. Another subaltern, Henry Moore Baldwin ('61), was mortally wounded and captured with two other guns; but Gen. Keifer, the division commander, highly praises McKnight's handling of his battery.

At Milford, Oct. 26th, "L" was again in action with the 2d Cavalry Division most of the day, as to which Gen. Powell reports that Weir was most effective in the service of his battery.

"M" had been of important assistance to Gen. Wheaton's command in the Opequon battle, as acknowledged by that officer.

"D," under Van Reed, supported the infantry's capture of the Weldon R. R. by the 5th Corps, Aug 18th; and on the next day poured a destructive fire into Mahone's men, after their initial successes in getting past our right in the dense woods and into our rear, from which they were driven, along with their captives, with whom they suffered alike by the furious fire these guns poured into them. Again, on the 21st, they had the hottest kind of work on their hands in repelling the desperate efforts of the Confederates to recover the road, and where both Lts. Catlin and Elliott were crippled for life by their wounds. All received the glowing commendations of Gen. Ayres, the division commander.

At Chaffin's farm (Fort Harrison), Sept. 29-30, "F," 5th (Martin), "displayed its old-time vigor in an action which occasioned heavy loss to the Federals." "C," "I," 5th (no wonder Beck), with Egan's division of the 2d Corps, in the movement to seize the Southside Road, was hurried forward to the Boydton Plank Road, where at Hatcher's Run, on the 27th October, they succeeded in silencing the guns which had opened upon the head of the column, but in so doing lost Lt. Burnes, M. A. Both Lt. Metcalf's section and the others were under a perfect hail of projectiles, and lost heavily, but it maintained its own vigorous fire, repulsing a vicious charge with canister.

Not until the ammunition was entirely expended did Beck withdraw his battery. Metcalf was severely wounded and captured. Beck was most highly commended by both division and corps commanders. First Sergt. Paul Roemer was highly praised, and, later, appointed to a commission.

The 4th Art. had been represented during these continuous campaigns and engagements near Roanoke Station, June 25th, by "C"- "E," 4th (Fitzhugh, with Reilly and Fuger), where it was placed in position with "B" and "K," 1st, from which they opened a heavy fire upon the enemy's batteries and works. The disadvantages of the change in the armament of the horse-batteries, which had been made at the first of the month, was now made evident, as the enemy's rifled guns soon threw the smooth-bores out of the contest. Finding that no further advance was practicable, the cavalry column turned to eastward and towards Ream's Station. From the intense heat and insufficiency of forage the animals were nearly worn out, while the men themselves were in not much better condition. Instead of the expected rest and support at the station they became the victims of a frightful disaster. After checking an assault at Stony Creek on the 28th, in a severe engagement lasting all night and through the 29th, when the enemy was encountered in an entirely unlooked-for manner and in overwhelming numbers, embracing all the three arms, "K" lost all their pieces, and Capt. Maynadier and Lt. Egan were both captured with 14 of their men and 20 of "B." The latter

battery also lost 60 horses. "K" lost, in all, 85 men, and was sent later to Washington to outfit, when it took station at Camp Barry and was not again connected with the army before Petersburg. "B" received 4 pieces in July and went into camp on the Appomattox.

"D," 4th, under Follett, with Thompson and Powell, had accompanied Hancock's demonstration to Deep Bottom, and was engaged on July 26th at that place, while "K," 4th, under Roder, with a volunteer assistant, was also called upon in the same locality from August 13th to 20th; and again, on the 27th October, at the Boydton Plank Road. In the first collision at Winchester, August 17, "C"- "E," 4th, officered as before, had been used, as at Summit Point four days afterwards, and at Kearneysville at same interval of time, and at Berryville the following day, the 26th.

"D" was again in action at the Fort Harrison fight, Sept. 29th-30th, and at Newmarket Road on Nov. 7th.

In another affair at Winchester, Oct. 25th, "C"- "E" was once more employed, and likewise at the one on Boydton Plank Road (Hatcher's Run), where the struggle against that misfortune cost it heavily, both in personnel and material.

Representing the 3d Art. had been "C," "F" and "K," under Ransom, Kelly and Barstow, at the White House fight, June 30th; again, in the Deep Bottom skirmishes and that at the first Winchester; at Cedarville, Aug. 16th; Kearneysville and about Smithfield and Shepherdstown; at Cedar Creek and at Mount Jackson, Nov. 22d. "E" under Sanger, had been availed of in the Newmarket affair. The 2d Art. had been represented by "A" (Robt. Clarke), at St. Mary's Church, June 24th, and at Lee's Mills, July 30th, on both occasions allied with "H"- "L," 1st; it was again requisitioned at the Deep Bottom skirmishes, Aug. 13th-30th; at Stony Creek, Sept. 16th; in affairs near Poplar Spring Church, Sept. 29th-Oct. 2d; in the Hatcher Run fights, Oct. 27th-28th, and in minor ones at Stony Creek once more on Dec. 1st, and on the 7th of that month along the Weldon R. R. "I," 2d, participated in the reception of Early's demonstration upon Washington, at Tenallytown, D. C., July 10th-13th.

"B"- "L," 2d, under Capt. Chas H. Pierce (Army '61), was called upon at White Post, Aug. 11th, and along with "D" (Williston), had plenty to do in the attack at Winchester, Sept. 19th, while the latter had been at work, a few days before, at Locust Ford. "B"- "L," is also on record at Bridgewater and Mt. Crawford, Oct. 2d-3d; and, again, at Cabin Hill, on the 7th of that month. Once more was it in demand on the 9th, at Edenton, and at Krop's Hill, on 13th; while the Cedar Creek battle, on the 19th, appears to have closed the year for them. "M," under Pennington, calls for notice as having performed its accustomed service at Kearneysville, with the other batteries already enumerated, ending for the season in an affair at Lacey's Springs, Dec. 21st.

Besides what has been already noted about the batteries of the 1st Art., and of the experiences of "K," with the officers given, on Wilson's raid about Ream's Station, June 22d, 23d to 29th, after being refitted it was consolidated with "L," when it arrived from the Gulf in August, and, equipped as horse-artillery, and under the command of Lt. Franck E. Taylor, was sent to Harper's Ferry to join Sheridan's command, where it was assigned to Devin's (2d) Brigade of Merritt's (1st) Division, and Aug. 18th, was engaged with the enemy at Smithfield while on a reconnaissance, driving them through the town and across the Opequon. In the battle of Winchester, Sept. 19th, resulting in the total defeat of the Confederates; and in the pursuit up the valley it

was engaged more or less every day. The other officers with the battery were W. C. Cuyler, 3d Art., and John McGilvray (Army '63), of the 2d. Again was it called into action at Fisher's Hill, 8th and 9th October, where the driving of Early had been continued; and when he came so near turning the tables on the Federals the battery received the most gratifying acknowledgment of its "admirable service," sharing with Pierce, Weir and Martin the plaudits of the commanders. At the end of the month it went into camp to rest up for the final campaign of the four years' struggle.

After the encounters which had involved "H"—"I," Garvin's section, with Gregg, it had a short skirmish at Lee's Mills on the 30th July, and a few days later was relieved from duty with the cavalry division. The battery accompanied the column which had been sent to the left against the Confederate works at Petersburg, and, Sept. 29th, and Oct. 1st, was again engaged under Reynolds at Arthur's Swamp and on the Wyatt road, where we have seen "A," 2d, also in action. In the last attempt of the year to turn the right of the enemy's line, Oct. 27th, the cavalry division with which the battery was serving gained the Boydton Plank Road, but the Federal forces were unable to attain their desired end and returned to their former stations. Battery "H"—"I" had been in action, but to little effect on account of the dense woods. Lt. Garvin had been assisted by Lt. Francis Reynolds (Army '62) on this occasion. Randol was the brigade chief. "D," commanded by Lt. R. M. Hall, had crossed the Appomattox with the 18th Corps, June 14th, to take part in the attack on Petersburg, and was engaged for four hours on the 16th and again on the 17th, fortunately with no casualties. Rejoining the 10th Corps, it was consolidated with "C," which had arrived from North Carolina, and moved with the expedition across the James in August, where on the 14th, 15th and 16th it was briskly engaged at Deep Bottom, Deep Run and near Fussell's Mills, being officered by Sanger, Tully and a volunteer lieutenant. Joining in the movement on north side of the James undertaken towards the end of September were "B" (Hall and Leahy); "C"—"D," Tully, Edward D. Wheeler (* '64) and the volunteer officer; and "M," under Capt. Langdon, with E. W. Olcott and Anthony Wayne Vogdes—then a volunteer. But the latter battery appears to have been the only one with the 10th Corps that was engaged, where it held the Newmarket road in the assault upon Fort Gilmore on the 29th, for two hours. Silencing the enemy's fire they covered the retreat of the storming column when it was repulsed. On the 1st October, "B" accompanied Terry's division on a reconnaissance about the defenses near Darbytown Road, where it was in action for some time; and on the 7th, while with Kautz, the division was attacked at sunrise and routed, and being cut off and left completely exposed, the battery, after having been fought to the last, had to be abandoned, Lt. Leahy being badly wounded. Both he and Lt. Hall, however, "received great commendation for their conduct in this affair, the disastrous result of which could in no wise be imputed to them." "C"—"D" was more fortunate although in a very exposed position, and escaped with no very serious loss; while "M," on the left, met with none at all. To the remains of "B" were added 4 new pieces, and by the end of the month it was again in readiness for active service and was placed in the entrenchments on the extreme right of the Army of the James. "C" was detached from "D" and sent to regimental headquarters and thence to Fort Independence, where it remained. The balance of the year made no further demands upon the batteries other than those recorded.

With the exception of some cavalry reconnaissance about Hatcher's Run, Va., Feb. 5th-7th, in which Dabney's and Armstrong Mills, Rowanty Creek and the Vaughan Road were included, and which had called for the services of "H"-*"I,"* 1st (Eakin and Reynolds); *"A,"* 2d (Lord), and *"K,"* 4th (Roder and his volunteer assistant), the batteries remained quietly in their camps, for the most part preparing for their rôles in the last act of the drama. The small affair at Taylorsville, mentioned in the cavalry paper, on March 14th, had called upon *"C"-*"E,"** 4th (Capt. M. P. Miller and Fuger), and resulted, as shown, in some important captures.

Hatcher's Run, again, on the 25th, found *"B,"* 4th (Stewart and Mitchell), *"K,"* idem (Roder), and *"D"-*"G,"** 5th (Rawles and Vose), operating vigorously; while Gordon's audacious attack upon Fort Stedman in the fruitless attempt to break through the enveloping lines upon that same date had found battery No. 9 occupied by *"C"-*"I,"** 5th, under Capt. Valentine Hughes Stone ('61), with McConnell. Under the admirable management of the artillery chief, Tidball, the fire from this battery alone cut off some 700 prisoners from the retreating assailants.

When the campaign actually opened, despite the climatic conditions that prevailed, *"B,"* 4th, and *"D"-*"G,"** 5th, found themselves in serious trouble during the early disaster that befell the 5th Corps upon the Quaker and Boydton Plank Roads. Here, Mitchell having been wounded, Vose was assigned to the command of *"B,"* 4th, March 29th. Upon the following day, and on the 1st of April, at the memorable Five Forks, both *"A,"* 2d (Lord), and *"M,"* idem (Woodruff, with his rifled section); and *"C"-*"E,"** 4th (Miller and Terence Reilly), shared conspicuously in the rounding up of the shattered Confederate forces. Hatcher's Run was once more the scene of conflict on April 2d, where *"K,"* idem, was in action after an all-night bombardment, as was also *"M,"* 1st, under Olcott, who had with him Elias Van Arsdale Andruss (* '64) and the same volunteer officer as before. This was when Petersburg finally fell that Sabbath day. Here Brinckle's *"E,"* 5th, had supported the assault of the 6th Corps with all its guns. *"C"-*"E,"** 4th (Miller, with Fuger), was operating with Devin's (1st) division of Merritt's command, and shared in the fierce struggle on the Southside R. R. on the 2d. That same day found *"A,"* 5th (C. P. Muhlenberg), with *"F,"* idem, under Beecher, moving with the 24th Corps (Gibbon), which had been organized from the troops composing the Army of the James; the former, with Foster's (1st) division had been furiously engaged in the attack on Fort Gregg, while the latter marched directly to Richmond, with Turner's (3d) division, which it entered without much opposition the following day. *"D,"* 1st (Tully), went into camp there also with Weitzel's command, and fired the salute of 100 guns on the 10th in honor of final victory. *"B,"* 1st (Elder, with Gibbs and Reynolds), was also attached to the same corps, while *"M,"* 1st, with the officers already mentioned, formed a unit in Langdon's artillery brigade in that 25th Corps, and, after the capture of Petersburg, had joined in the pursuit; on the 3d that officer assisted in raising the flag of the Union on the staff on top of the State Capitol, from which "the symbol of the Confederacy had floated for 24 long years!"

At Deep Creek, at the same time, Woodruff had found something to do, and Lord at Lisbon Centre. The former was again hammering away at Sailor's Creek on the 6th, while *"B,"* 1st, and Miller, with *"C"-*"E,"** 4th, and Roder, with *"K,"* idem, were all gallantly playing their parts.

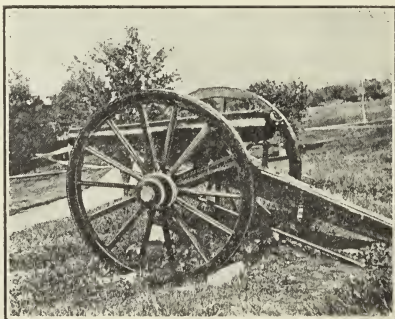
Lord was at work again, at Farmville, on the 7th, and while the curtain was dropping on the final act he and Woodruff were leading actors. Elder, despite the loss of 35 horses during the taxing pursuit, was settling up his Charleston indebtedness, as a prisoner of war, while "M," 1st, was ably assisting in the accounting. "D," 5th, the "West Point Battery," was, appropriately, at the ending of a tragedy in every act and phase of which it had been an active participant; and it stood in position, occupied with "G," under Rawles and Vose, as "a silent witness, speaking for peace."

In Newhall's words: "All of our horse-artillery was splendid, commanded by young and dashing fellows, whose delight was to fight with the cavalry in an open country where they could run a section up to the skirmish-line and second the carbines with their whistling shells; and, if we were retreating and hotly pursued, as sometimes used to happen, the eager enemy was always held at bay by the rattling fire of these steady cannoniers who would cling to a ridge till the gaining of it was hardly worth the cost. * * * Tidball, Randol, Fitzhugh, Pennington, Williston, Martin, Dennison, Eakin, Woodruff, Vincent, Calef, Butler and the rest were out-and-outers—not very often heard of and not much known beyond the army, but where the sharp fighting was they could be found; in the hardest marches they pulled through somehow, and in camp it was a pleasure to see these swells, with their open jackets, tight trousers with the double crimson stripes, their gorgeous badges, their riding whips and their fast horses."

In the Fort Fisher expedition which Terry had made such a success, at Cape Fear River, N. C., on Feb. 22d; and on March 24th, at Cox's Ferry, "E," 3d, under Myrick, had been playing its rôle.

And Rodney, with "I," 4th, attached to Upton's (4th) division, was an actor in Wilson's sweeping raid through Alabama, where skirmishes at Jasper, March 25th; at Ebenezer Church, near Plantersville, April 1st-2d; and at the battle of Selma on the latter date had required his assistance, until on the 16th April, at Columbus, Ga., he was assisting in lowering the "drop," when it swiftly fell upon the finale, bearing the legend, *Finis Coronat Opus!*

[The series of "The Regular Army in the Civil War" will be continued in the next number of the JOURNAL with the first paper on "The Infantry."]



Dear Mr.

Prompted
as I believe
without any
to immediately
while a man
which we
is again
interest in
will do us
our warm
a companion

Yours

Samuel

Edwards

J. D. Bu

James

W. H.

United States Military Academy
West Point August 23rd 1872

Dear Sir,

Impelled by what we consider our duty, as well
as inclination, we cannot suffer you to depart
without endeavoring to pay you a tribute of respect
to eminently your due, on your Smithsonian conduct
while a member of this Institution. The friendship
which we feel, and which we must feel who
is acquainted with you, induces us to further hereby
interest in your future welfare — and we hope you
will do us the pleasure to believe that, so far as
our warmest wishes can go, they will always
accompany you.

With the highest Consideration
& esteem, your obedient servant.

Charles F. Wilson

James Mearns

J. B. Richards

J. D. Burnham

James R. Brown

W. Wright

Henry W. Ball

St. Charles

W. L. Lichen

W. M. Dittmar

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Wm. A. Hopkins

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Thos. A. Brown

Alex. Schackay

George A. Kelly

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J. P. Wise

A. Johnston

J. P. Brown

A. Hinton

Wm. McCallister

John B. Grayson

W. H. H. H. H.

A. H. Miller

W. H. H. H.

Wm. A. Gordon

L. H. H. H.

J. B. H. H.

E. B. H. H.

(allies)

Henderson

James A. Anderson

Donville

Jay Cox

Wm. H. H. H.

H. Bickley

Osborn Cross

Thos. A. Brown

Hay Schackay

George A. Hilly

Wm. H. H. H.

Wm. Rose

T. B. H. H.

H. H. H. H.

J. Thompson

H. H. H. H.

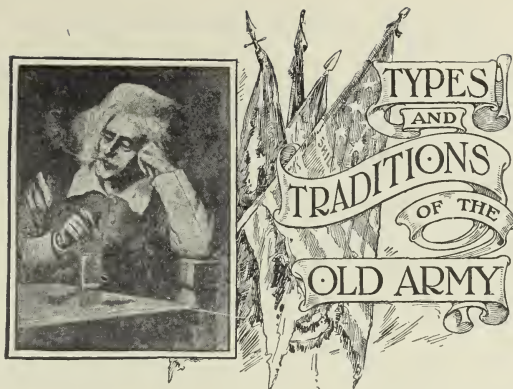
J. H. H. H.

J. H. H. H.

Wm. H. H. H.

H. H. H. H.

H. H. H. H.



EARLY WEST POINT.

A ROUND-ROBIN OF THE '20S AND CAREERS OF SOME OF THE SIGNERS.

IN examining some family papers, brown with age, the original document, of which the frontispiece is a facsimile, came to light. Believing that a glance at the subsequent careers of the cadets whose names are signed to this testimonial of friendship will be of interest to our readers, a synopsis of their service is appended.—[THE EDITOR.]

1822.

WILLIAM ROSE, N. Y. (7) Bt. 2d Lt. 2 Art. July 1, 1822, to 2d Lt. 4 Art. July 1, 1822. Served: Ordnance duty Fla.-La. 1824-5. Died Nov. 22, 1825, at Washington, D. C., aged 24.

THOMPSON B. WHEELOCK, Mass. (10) Bt. 2d Lt. 4 Art. July 1, 1822, to 1st Lt. 1 Drags. Sept. 19, 1833. Served: In garrison 1822-29, when he resigned. President Woodward Coll., O., 1830-33. Reapp. 1st Lt. 1 Drags. Sept. 19, 1833. In Fla. War 1836. Died June 15, 1836, Ft. Micanopy, Fla., aged 35.

AUGUSTUS CAMFIELD, N. J. (13) Bt. 2d Lt. 1 Art. July 1, 1822, to Captain Topographical Engineers, July 7, 1838. Served: In garrison to 1835; on river and harbor duty; Supt. Sault Ste. Marie Canal 1853-54. Died April 18, 1854, at Washington, D. C., aged 53.

DAVID H. VINTON, R. I. (14) 2d Lt. 1 Art. July, 1822, to Col. A. Q. M. G. July 29, 1866 (Bt. Brig.-Gen. March 13, 1865). Served: In Creek and Florida Wars 1836-39, Mexican War 1848, and as Depot and Chief Q. M. of various hdqrs. 1851-66. Died Feb. 21, 1873, at Stamford, Conn., aged 70.

1823.

GEORGE C. RICHARDS, N. Y. (3) Bt. 2d Lt. 2 Art. July 1, 1823, to 2d Lt. 4 Art. July 1, 1823. Served: On ordnance duty 1823-5. Died Nov. 22, 1825, at Paris, France, aged 22.

FREDERICK SEARLE (Eng.). (10) Bt. 2d Lt. 1 Art. July 1, 1823, to Captain A. Q. M. July 7, 1838. "Bt. Major Nov. 25, 1839—gallantry and good conduct. * * War against Florida Indians." Served: In garrison, N. Y. and Mich. (1823-30); Florida War (1836-39); severely wounded (1839). Died July 19, 1853, at Sulphur Springs, Va., aged 50.

- RICHARD DE TREVILLE, S. C. (11) Bt. 2d Lt. 3 Art. July 1, 1823, 2d Lt. 2d Art. July 1, 1823. Served: On ordnance duty (1823-24). Resigned April 30, 1825. Civil Hist. Lawyer, State Senator, Mem. Bd. of Visitors, M. A. (1854), Lt.-Gov. S. C. (1828-33), Col. S. C. Militia (1833-36). Died Nov. 25, 1874, at Somerville, S. C., aged 73.
- LEVI M. NUTE, N. H. (15) 2d Lt. 6 Inf. July 1, 1823, Capt. 6 Inf. July 31, 1836. Served: On frontier duty (1824-26) and at Leavenworth, Jeff. Bks. and La. (1829-36). Resigned Jan. 31, 1838. Civil History. On Kendall's Sante Fe Exp. 1843. Died July, 1846, at R. Isabel, Tex., aged 46.
- MARK W. BATMAN, Pa. (16) 2d Lt. 6 Inf. July 1, 1823; Capt. 6 Inf. Nov. 16, 1836. Served: Frontier Council Bluffs and Indian Country (1823-37). Died July 31, 1837, Mount Vernon Arsenal, Ala., aged 38.
- LORENZO THOMAS, Dela. (17) 2d Lt. 6 Inf. July 1, 1823; Brig.-Gen., Bt. Maj.-Gen., U. S. A.; Adj.-Gen. of the army Aug. 3, 1861. Served: Frontier duty, Fla. (1824-29); Staff duty (1833-46); Mexican War (1846-48) (Bt. Lt.-Col.); Hdqrs. army (1848-53); Chief of Staff, General Scott (1853-61); inspection duty, etc. (1861-69). Retired Feb. 27, 1869. Died March 2, 1875, aged 70.
- JULIUS J. B. KINGSBURY, Conn. (18) 2d Lt. 2 Inf. July 1, 1823; Maj. 6 Inf. May 7, 1849; Bt. Maj., gallant and meritorious conduct at Contreras and Churubusco. Served: On northern frontier (1823-35); Florida War (1838-40); Mexican War (1846-48); San Diego, Cal. (1849). Died June 26, 1856, Washington, D. C., aged 55.
- RICHARD D. C. COLLINS, N. Y. (20) 2d Lt. 4 Inf. July 1, 1823; Capt. 4 Inf. Nov. 2, 1836. Served: Fla., Ala., La., in garrison and constructing roads, etc. (1823-39). Died July 1, 1841, at Little Rock, Ark., aged 46.
- WILLIAM REYNOLDS, Dela. (21) 2d Lt. 1 Inf. July 1, 1823; 1st Lt. 1 Inf. May 1, 1829. Served: In garrison and staff duty, Fla. and La. (1824-28), and Ft. Snelling (1829-30). Resigned Aug. 1, 1830. Died Aug. 30, 1830, at Ripley, O., aged 25.
- JOSEPH R. SMITH, N. Y. (22) 2d Lt. 2 Inf. July 1, 1823; Maj. 7 Inf. June 11, 1851. Bt. Maj. and Bt. Lt.-Col. (1847); "gal. and mer. conduct Cerro Gordo, Contreras and Churubusco, Mex., where twice wounded." Served: In garrison, Mich, Me., N. Y. (1823-38); in Florida War (Capt.) (1838-42); Sacketts' Harbor, N. Y. (1842-46); Mexican War (1846-47); in garrison and recruiting (1848-50). Retired Sept. 25, 1861. In Civil War, mustering and disbursing officer (1862-68). Died Sept. 3, 1868, at Monroe, Mich. Bt. Brig.-Gen. 1865 for "long and faithful services."
- HANNIBAL DAY, Vt. (23) 2d Lt. 2 Inf. July 1, 1823; Col. 6 Inf. Jan. 7, 1862; Bt. Brig.-Gen. March 13, 1865, "for long and faithful services in the army." Served: In garrison, Ft. Brady, Mich. (1823-28); Fort Niagara, N. Y. (1832); Ft. Dearborn, Ill. (1832-33); Florida War (1838-42); Mexican War (1846-47); in California (1849-53); frontier duty, Minn. and Dakota (1851-61); Civil War, Col. 6 Inf., commanding brigade at Gettysburg and on detached service (1863-69). Retired Aug. 1, 1863. Died March 26, 1891.
- JOSEPH A. PHILLIPS, N. J. (26) 2d Lt. 2 Inf. July 1, 1823; Capt. 8 Inf. July 7, 1838. Served: In garrison at Ft. Gibson, I. T. and frontier

duty (1824-34); Asst. Inst. Military Academy (1834-35); Canada Border (1838-39); Jefferson Barracks (1840). Resigned Sept. 30, 1840. Died Jan. 4, 1846, at Quincy, Ill., aged 41.

GEORGE H. CROSMAN, Mass. (30) Bt. 2d. Lt. 3 Inf. July 1, 1823; Col. A. Q. M. G. Feb. 23, 1863; Bt. Maj., "gal. and mer. conduct," Palo Alto, Tex.; Bt. Maj.-Gen., "faithful and meritorious services," March 13, 1865 Served: On frontier duty, Ft. Mackinac (1823); to Jefferson Barracks (1827); as Q. M. Indian Country (1830-37); Mexican War (1846-47); Chief Q. M. at Philadelphia (1861-65). Retired for age July 29, 1866. Died May 28, 1882, at Philadelphia, aged 84.

EDMUND B. ALEXANDER, Va. (33) 2d Lt. 3 Inf. July 1, 1823, to Col. 10 Inf. March 3, 1855. (Bt. Maj. April 18, 1847, for "Cerro Gordo, Mex.," and Bt. Lt.-Col. Aug. 20, 1847, for "Conteras" and "Churubusco," Mex.; Bt. Brig.-Gen. Oct. 18, 1865, for "meritorious services.") Served: On frontier, Iowa, Mich, Wis., Mo., and Ill. (1824-30); A. Q. M. (1833-38); Mexican War (1846-48); New Mexico and Texas (1848-55); Ft. Snelling and Utah Exp. (1856-58); Civil War, A. P. M. G. and mustering and disbursing officer (1863-66). Retired Feb. 22, 1868. Died Jan. 3, 1888, at Washington, D. C., aged 85.

ALBERT S. MILLER, Tenn. (34) 2d Lt. 1 Inf. July 1, 1823, to Maj. 2 Inf. March 15, 1848. (Bt. Maj. Sept. 23, 1846, "Monterey," Mex.) Served: In garrison, Ark., La., Wis., Minn. (1823-32); Black Hawk War (1832); Florida War (1837-41); frontier duty, Wis. (1842-46); Mexican War (1846-48); frontier duty, Cal. (1849-52). Died Dec. 7, 1852, at Benicia, Cal., aged 49.

1824.

JOHN N. DILLAHUNTY, Miss. (7) 2 Lt. 4 Inf. July 1, 1824. Served: on Topog. to Jan. 31, 1832. Resigned April 14, 1832. Civil Hist. Engineer Woodville, Miss., and St. Francisville, La., R. R. (1832-44). Died 1844 at Woodville, aged 44.

JOHN M. W. PICTON, N. J. (12) 2d Lt. 2 Art. July 1, 1824. Served: Fort Monroe (1825-26); in garrison, N. Y., La., Miss. (1826-31). Resigned March 1, 1832. Civil Hist. Physician, New Orleans (1832-59). Died Oct. 28, 1859, at New Orleans, La., aged 55.

HORATIO A. WILSON, N. Y. (13) 2d Lt. 4 Art. July 1, 1824, to 1st Lt. 4 Art. May 30, 1832. Served: Engineer and ordnance duty (1824-31); Black Hawk War (1832); garrison, Mich, N. Y. (1833-35). Resigned Jan. 31, 1835. Civil Hist. Chief Engineer H. & G. R. R., Cuba (1835-38); lawyer (1841-50). Died Jan. 17, 1850, at Troy, N. Y., aged 46.

WILLIAM BICKLEY, Ky. (18) 2d Lt. 7 Inf. July 1, 1824. Resigned July 15, 1825. Civil Hist. Farmer (1825-52); member House of Representatives (1848-49); hotel proprietor, Washington, Ky. (1852-57). Died July 21, 1877, at Washington, Ky., aged 75.

ALEXANDER JOHNSTON, Pa. (21) 2 Lt. 5 Inf. July 1, 1824; Capt. 5 Inf. Oct. 31, 1836. Served: Ft. Snelling (1825-27); Ft. Crawford, Wis. (1827-28); Black Hawk War (1832); Canada border disturbances (1838-41). Died June 8, 1845, at Pittsburg, Pa., aged 39.

1825.

THOMPSON S. BROWN, N. Y. (4) 2 Lt. Engrs. July 1, 1825; 1 Lt. Engrs. May 15, 1835. Served: Military Acad. as Asst. Prof. Math.; Asst. Engr. Constr. Ft. Adams, R. I. (1825-26); A. D. C. to Gen.-in-Chief (Brown) (1826-28); Engr. Imp. of Ark. River (1833), Cumberland Road (1833-34), Charleston Harbor (1834-35), Lake Erie Harbor and lighthouses (1835-36). Resigned Oct. 31, 1836. Civil Hist. Civil Engr. U. S. (1836-49), Russia (1845-54); Chief Engr. superintending harbor imp. on Lake Erie (1836-38); Consulting Engr., in the service of Czar of Russia, of the St. Petersburg & Moscow R. R. (1849-54). Died June 30, 1855, at Naples, Italy, aged 48.

FRANCIS TAYLOR, Va. (9) 2 Lt. 4 Art. July 1, 1825; Maj. 1 Art. March 3, 1855; Bt. Maj. April 18, 1847; Gal. and mer. conduct in Battle of Cerro Gordo, Mex.; Bt. Lt.-Col. Aug. 20, 1847; gal. and mer. conduct in Battle of Churubusco, Mex. Served: Fort Monroe (1826-28); Charleston Harbor (1832-33); Florida War (1836-37); Canada border disturbances (1839); war with Mexico (1846-48); frontier duty Ft. Brown, Tex. (1856-58). Died Oct. 12, 1858, at Ft. Brown, Tex., aged 53.

WILLIAM FENN HOPKINS, Conn. (11) 2 Lt. 4 Art. July 1, 1825; 1 Lt. 4 Art. Sept. 14, 1834. Served: at Military Acad. as Prof. Chem., Mineralogy and Geology (1826-35). Resigned June 30, 1836. Civil Hist. Merchant (1836-43); Principal Norfolk Acad. (1843-46); Prof. Nat. and Exper. Phil. U. S. Naval Acad. (1850-59). U. S. Consul to Jamaica, W. I. (1859). Degree of A M conferred by Yale Coll. (1833) and LL.D. by Trinity Coll. (1853). Died July 13, 1859, at the Island of Jamaica, W. I., aged 57.

ALEXANDER D. MACKAY, N. Y. (16) 2 Lt. 1 Art. July 1, 1825; 1 Lt. 1 Art. Feb. 14, 1833. Served: At Military Acad. (1825-26); Topog. duty (1826-33); Ft. Washington, Md., (1833-35); Coast Survey (1835-36). Drowned Dec. 18, 1836, off St. John's Bar, Fla., aged 32.

JAMES R. IRWIN, Pa. (17) 2 Lt. July 1, 1825; Capt. 1 Art. May 16, 1842; Bt. Capt. Aug. 21, 1836; gal. and mer. conduct in war against Fla. Ind. Served: Garrison Ft. Monroe (1826-28); Ordnance duty (1828-29); Engr. duty (1833-34); Florida War (1836-38); Q. M. duty, Phila. (1838-40); occupation of Texas (1846); Chief Q. M. army commanded by General Scott in war with Mex. (1847-48). Died Jan. 10, 1848, in City of Mexico, aged 47.

HORACE SMITH, N. Y. (18) 2 Lt. 1 Art. July 1, 1825. Served; On Topog. duty (1825-26) and in garrison Ft. Monroe (1826-28). Died at St. Augusta, Fla., Jan. 28, 1828, aged 24.

OSBORNE CROSS, Md. (26) 2 Lt. 4 Inf. July 1, 1825; Col. and Asst. Q. M. Gen. July 29, 1866. Served: Frontier Ft. Snelling (1828-32); commissary duty (1832-33); military occupation of Texas (1845); Chief Q. M. General Wood's div., war with Mex. (1846-47); Chief Q. M. Army of Mex. (1848) and Pacific Div. (1852-57); War of Rebellion (1862-66); Chief Q. M. Army Miss. (1862), of the camp of instruction, Baltimore (1862), and at Pittsburg Depot (1863-65). Retired July 29, 1866. Died July 15, 1876, at New York City, aged 73.

H. ST. JAMES LINDEN, Md. (29) 2 Lt. 6 Inf. July 1, 1825; 1 Lt. 6 Inf. March 4, 1833. Served: On reg. staff duty (1826); Jefferson Bar-

racks, Mo. (1829-31); sick leave (1833-36). Author of "Military Manual" (1830). Died Aug. 10, 1836, at Baltimore, Md., aged 34. Named James S. Thompson when graduated.

JAMES J. ANDERSON, Ky. (30) 2 Lt. 6 Inf. July 1, 1825. Served: Ft. Atkinson, Iowa (1826), opening mil. road from Ga. line to Smyrna. Resigned July 1, 1830. Civil Hist. Counselor at law, Mason Co., Ky. (1837-45). Died Oct. 1, 1845, in Mason Co., Ky., aged 40.

JAMES D. BURNHAM, N. Y. (31) 2 Lt. Marines to 2 Lt. 3 Art. Served: In marine corps (1825-26); Ft. Monroe (1826-28). Died March 6, 1828, at Old Point Comfort, Va., aged 27.

JAMES ENGLE, N. J. (35) 2 Lt. 4 Inf. July 1, 1825; 1 Lt. 5 Inf. Jan. 25, 1827. Served: Frontier duty Ft. Townsend, I. T. (1826-27); Ft. Crawford (1827-28); Ft. Dearborn (1828-31). Resigned Dec. 31, 1834. Died 18—.

1826.

WILLIAM H. C. BARTLETT, Mo. (1) 2 Lt. Engrs. July 1, 1826; Prof. Military Acad. April 20, 1836. Served: Military Acad. (1827-29); Asst. Engr. Constr. Ft. Monroe (1828), Ft. Adams (1829-32); Asst. to Chief of Engrs., Wash. (1832-34); Military Acad. as Prof. Nat. and Exper. Phil. (1836-71). Retired Feb. 14, 1871.

BENNETT H. HENDERSON, N. C. (7) 2 Lt. 3 Art. July 1, 1826. Served: At Military Acad. as Asst. Prof. of Geography, Hist. and Ethics (1826-29); Judge Adv. Western Dept. (1830-31). Resigned June 30, 1832. Civil Hist. Counselor at law, St. Louis, Mo. (1832). Died July 8, 1832, at St. Louis, Mo., aged 27.

THEOPHILUS B. BROWN, N. Y. (18) 2 Lt. 3 Art. July 1, 1826. Served: At Military Acad. as Asst. Teacher of Drawing (1826-32); leave (1832-34). Died Sept. 14, 1834, at Utica, N. Y., aged 32.

JOHN B. GRAYSON, Ky., (22) 2 Lt. 2 Art. July 1, 1826; Maj. Sub. Dept. Oct. 21, 1852; Bt. Maj. Aug. 20, 1847, for gal. and mer. conduct in Battles of Contreras and Churubusco, Mex.; Bt. Lt.-Col. for gal. and mer. conduct in Battle of Chapultepec, Mex. Served: At Ft. Monroe (1826-28); topog. duty (1828-32); Florida War (1835-36); Chief Commissary of army under command of Major-General Scott (1847); Mexican War (1847); Chief Commissary Dept. of New Mex. (1855-61). Resigned July 1, 1861. Died Oct. 21, 1861, at Fernandina, Fla., aged 55.



"Education and National Defense."

A Professor of Military Science.

The appropriation from the National Government for the encouragement of the agricultural and military departments of the agricultural and military colleges of the different States at present goes direct to the authorities of the said colleges. The cadets never see a cent of it, and in most cases are not informed as to the source from which it comes, and hence are generally ignorant of the existence of such an appropriation and can see no reason why the military work is *imposed* upon them. Many, if not all, of the agricultural and military colleges have only such military instruction as they are compelled to have; and, what is worse, they (the college authorities) do not hesitate to let the cadets *know* how they stand on *that* point. Then is it any wonder that the cadets regard all military work as an imposition on the part of the Government, and its immediate representative, the Commandant? Is it any wonder also that we do not get better results or more loyal service from the cadets?

Every minute of time given to military exercises is begrudged by the college authorities, and hence by the cadets also.

During the past summer I have been associated with several other professors of military science and tactics, and this subject was often discussed by us, and, without exception, they agreed with the above facts and sentiments.

To my mind Lieutenant Mayes has struck the real solution of the *difficulty*; whatever funds the National Government sees fit to appropriate for the military education of the youth of the land should go *direct* to the youth; then we can make our trade with the youth direct.

At the present day, especially in time of peace, money will accomplish more than any *attempt* at instruction regarding patriotism. This is a trading age, and the thing to be traded for must be visible and tangible. If we ask of a student so much of his college time we must give him something in exchange for it; and, to get the best result, that something must be in evidence.

Many of the malingerers at my college, who trump up excuses to get out of the military, are poor boys, and poverty is often the reason for their action. It costs considerable to provide neat uniforms. If the National Government supplied the uniform to the cadets and paid for their board, we could not *drive* them out of the military department.

Some compensation should be made to the college for the privilege of having the military department established at it; but more must be made to the man who actually does the work, namely, the student himself.



WINTER MANEUVERS OF ROYAL CANADIAN HORSE ARTILLERY.

From "Royal Artillery Journal."

THE Royal Canadian Horse Artillery was organized into a composite six-gun battery, two sections armed with 12-pr. B.L. 6-cwt. guns, and one section with 18-pr. Q.F. guns.

The guns were mounted as follows:

4 12-pr. B.L. guns on sleigh runners.

1 18-pr. Q.F. gun

1 18-pr. Q.F. gun and limber dismounted and placed on a farmer's bob, with the wheels on a farmer's platform sleigh. Operations were carried out in accordance with a General and Special Idea.

15th February:

Weather.—Clear and cold. At 3 P. M., 10°F., with a fresh easterly breeze. 10 P. M., milder. Snow on the level about 15 inches deep, but much drifted in places.

Operations.—9.45 A. M. Inspection by I.G. 10 A. M., marched off to get a suitable position, the battery had to move about 300 yards down a lane where snow had drifted to a depth of about 3 feet, and then into a field, covered with 15 inches of snow, with many boulders and holes. The guns on sleigh runners acted satisfactorily so far as could be ascertained with drill ammunition only, though a pole was broken by a gun striking a boulder concealed under the snow. Camp reached at 3.30 P. M. Distance, 14 miles.

16th February:

3 A. M. Rain commenced, freezing as it fell, accompanied by a gale from the west. 10.30 A. M. Much colder with a slight northerly breeze. 6 P. M. Temperature 10°F. with a slight northeast breeze. Reveillé 6.30 A. M. Stables 6.45 A. M. Breakfast 7.30 A. M.

Operations.—9 A. M. Marched off. Watered after half an hour six miles from camp. Came into action with drill ammunition in a

light wood 150 yards off the road in $1\frac{1}{2}$ to $2\frac{1}{2}$ feet of snow. The guns on sleigh runners acted well. Camp reached at 1.35 P. M. Distance 11 miles.

17th February:

Reveillé 6.30 A. M. Stables 6.45 A. M. Breakfast 7.30 A. M.

Weather, 6 P. M.—Commenced to snow, by 9 A. M. a blizzard was blowing with thick though light snow. Thermometer 10°F .

Operations.—The 4 12-pr. B.L. guns fired a series of 37 live shells from a concealed position. Practice satisfactory, except that there was a delay in running up, and the shooting not quite so accurate as on bare ground on account of recoil not being so constant. Range 2300 yards.

The 2 18-pr. Q.F. guns then fired 27 rounds live shell (19 effective) after advancing 2500 yards. Both these series were fired on ice, 15 inches to 18 inches thick.

2.30 P. M., started back for camp. 3.45 P. M., reached camp.

18th February:

Reveillé 6 A. M. Marched off 9 A. M.

Weather.—Ten inches of snow had fallen during the night, which on account of the blizzard had formed large drifts. Thermometer, 6 A. M., 10°F .; 7.30 A. M., 4°F . 9 A. M., bright sunshine and light breeze (N.).

Operations.—The roads had not been broken since the blizzard and were very heavy, while in places the horses were girth deep in snow. The detachments were ordered to the front of all guns, and so assisted in breaking the trail. 12 noon, halt, cold lunch. 1 P. M., march resumed. 4.50 P. M., barracks reached. Distance, 26 miles.

GENERAL REMARKS.

Buffer Oil.—18-pr. Q.F. buffers should be emptied as the oil will freeze, and should be filled with the mixture as laid down in "Care of War Material" for garrison mountings subject to frost, viz.:

Methylated spirits	7 gallons.
Distilled water	$3\frac{1}{4}$ "
Carbonate of soda	250 grains.
Mineral oil	$\frac{1}{4}$ gallon.

This mixture was used with the 18-pr. Q.F. guns and acted well.

Poles.—Poles are very liable to snap if a concealed boulder is struck when moving in open fields, and it would be advisable for each subsection to have two spare poles when setting out on winter maneuvers.

Ammunition.—Both 18-pr. Q.F. and 12-pr. B.L. ammunition acted normally at plus 10°F . after having been subjected to -4° within 24 hours previous to the gun practice on the 17th.

Tents and Bivouac.—Tents were pitched near trees, and the thicker the wood the better for shelter and stability, fir or pine branches were, when practicable, put in thick layers under the water-proof sheets, and these were found to prevent the cold from working through underneath. Four iron pegs were found most useful, and with these four points fast, the tent was made fast with branches and snow. It is most important that a thick layer of branches be placed under the blankets, and if these are not procurable, more blankets should be placed under rather than over, as the most penetrating cold comes from underneath.

Drying Fires.—It would be very desirable when time permitted it, every two days if possible, to make large drying fires, where wet socks, horse blankets, etc., might be dried out. Officers and N.C.O's should see to this with great care.

Bits.—If bits are placed in the horse's mouth without being warmed a great deal of suffering will be caused by their sticking to the mouth and lips, and it is essential to warn all mounted men of the necessity of thawing out the bits in front of the fires available before biting up.

Horses' Heels.—Before starting out for maneuvers and directly upon arrival in camp, after the heels were dried off, a mixture of mutton fat and sulphur was rubbed into the heels, which proved an effective preventative against cracks.

Ground Scouting.—It was found impossible to ground scout in the actual gun practices in the manner laid down in the "F.A.T.," on account of the snow concealing boulders, holes and stumps, etc. Except when under fire it would, therefore, be most advisable to have the detachments well in front of the guns when advancing for action so as to avoid the danger of a gun capsizing by driving into a hole, or poles being broken on account of the sledge runners striking a concealed boulder, stump or other obstacle.

The gun platforms also should, when possible, be tramped down by the men on foot before the guns come up so as to ascertain that the platform is fairly level, and that there are no concealed obstacles, for once a gun was unlimbered on an unfavorable platform the consequences might be very serious, and it is impossible to tell anything by eye about the ground when it is covered with snow.

Observation of Fire.—Observation of fire was found to be much more difficult than in summer time, as the smoke was not so easily seen against the prevailing whiteness, and for the same reason it was very difficult to distinguish between a "graze" and a low "air."

SUB-APPENDIX "A."

WATERING, FEEDING AND CLOTHING OF HORSES ON WINTER MANEUVERS.

Watering.—Even in hard work it was found that horses required very little water, and a certain amount of snow was picked up with the hay.

Horses were watered twice a day only and drank from one to one and a half buckets on each occasion.

They would not drink at all on starting off, so halts for watering were made at the first convenient place after three or four miles had been covered. The second watering was carried out immediately on arrival in camp.

Two pumps with three feet of piping were carried to let down through the ice, but these were not required, as it was found that a man with an axe could make a good water hole in about three minutes, and buckets were dipped in and horses watered from them.

It might be worth noting that as soon as the water is let into the hole it gushes up to the level of the top of the ice, so that as soon as it is seen oozing in, the cutting should be completed to the required dimensions, after which a single blow of the axe will flood the water hole. If the water is let in before the hole is completed a new hole will have to be cut.

Feeding.—12 pounds of oats and 18 pounds of hay were found to keep the horses fit. The hay could be doubtless reduced, and the oats increased, if on active service it was found impracticable to transport the hay on account of its bulk.

SUB-APPENDIX "B."

COOKING.

Utensils.—Four 10-gallon and fifteen 2½-gallon ordnance store iron kettles of 10-gallons capacity were taken from the cook-houses, and these with the ordinary camp kettles were the only vessels used. Iron tripods connected with a rod with "S" hooks completed the camp cooking arrangements.

Organization.—Two cook-houses only were kept going; one for Officers' Mess and one for N.C.O's and men.

The cooking was very satisfactory, but it is very probable that the men would have lived better had section, or even sub-section, cook-houses been established. This, however, was impossible with the number of men available for cook duty, and it seems doubtful whether small sub-section or troop cook-houses would ever be possible, on account of the duties required from mounted branches, and on this occasion dismounted men were kept down to the smallest number possible.

With infantry, however, it would be a simple matter to have a cooking establishment for every twenty or twenty-five men, provided proper arrangements were made for drawing wood, etc. The chief disadvantages of the one large battery cook-house appears to be, that though such things as stews, pork and beans, tea and coffee, etc., are easily made, yet there is no opportunity when cooking for a large number by a couple of cooks to make scones, dampers and such like things, and though in this case the men got as much hot stew with biscuit and tea or coffee as they could eat or drink, both night and morning, they would have undoubtedly lived better had smaller than battery cooking units been possible, and in the latter case an issue of more flour and less biscuit would have been advisable.

For individual cooking also, an issue of a couple of frying-pans per sub-section for making scones or dampers, would be of benefit to the men.

Rations.—Rations were drawn from the C.P.A.S.C., four-days' rations being drawn before marching out.

Bread.—Very little bread was taken, as it froze when exposed to the weather for a short time. The issue of 1½ pounds of bread per man was exchanged for 1 pound of biscuits. These biscuits were made in Kingston and were in good condition at all times; the weather not affecting them. They are similar to the ordinary sea biscuit.

Fresh Meat.—Two-thirds of the total quantity was cooked before marching out, which froze solid the first day. It could not then be issued to the men until it was re-cooked. The meat was then cut up and served with vegetables in stew. The raw beef, which mainly consisted of bones, etc., from the above, was made into soup once a day for all ranks.

Bacon.—The bacon was exchanged for fat pork; this after being boiled at night and served cold with beans, biscuits and coffee, was found to be one of the best meals, and relished most by the men.

Jam.—Part of this ration was taken, the balance being exchanged for onions and other vegetables. Jam is not a very serviceable ration on a march of this nature, and it becomes very hard with the cold, and dirties up the men's mess tins more than the stews or soup.

Potatoes.—The potatoes froze solid when exposed to the weather for a short time, and were used once a day by putting them in cold water a few hours before they were required, in order to take the frost out, and then sliced up and put into the stew or soup.

Tea, Coffee and Sugar.—The regular issue of these was not sufficient, as it was found necessary to have tea and coffee available at all times in camp, and especially during the night, for men on duty. It was found that a double issue fulfilled requirements.

SUB-APPENDIX "C."

Siting of Camps.—Camps, when practicable, should be made in the pine forests on account of shelter, the next best is light wood, and failing that, ground which is protected by natural features from prevailing winds. It was found that where unsheltered by woods, the wind swept down the hollows unless the ground was very steep. As both men and horses drink less than in summer the close proximity of water to the camp appears to be less important, and at Verona, where the water was three-quarters of a mile away, there was no undue loss of time in watering horses, and sufficient water for boiling tea and pork, etc., was quickly brought up on transport or sleighs. It may not follow that water could always be brought up in this way for a large force, but experience showed that to get men and horses into natural shelter was most important.

SUB-APPENDIX "D."

Country.—The country traversed was very rough, there were a number of steep hills with short turns, and in many places there was only just width enough for the gun to pass. The roads in many places were quite blind, and the greatest care had to be taken when passing over the narrow culverts.

The third day out was the worst in this respect, as about eight of the ten miles traversed was through woods and over lakes, along a lumber road which had a number of steep hills.

The roads in general might be summed up as average bad ones, and this might be borne in mind when considering the transport of the guns.

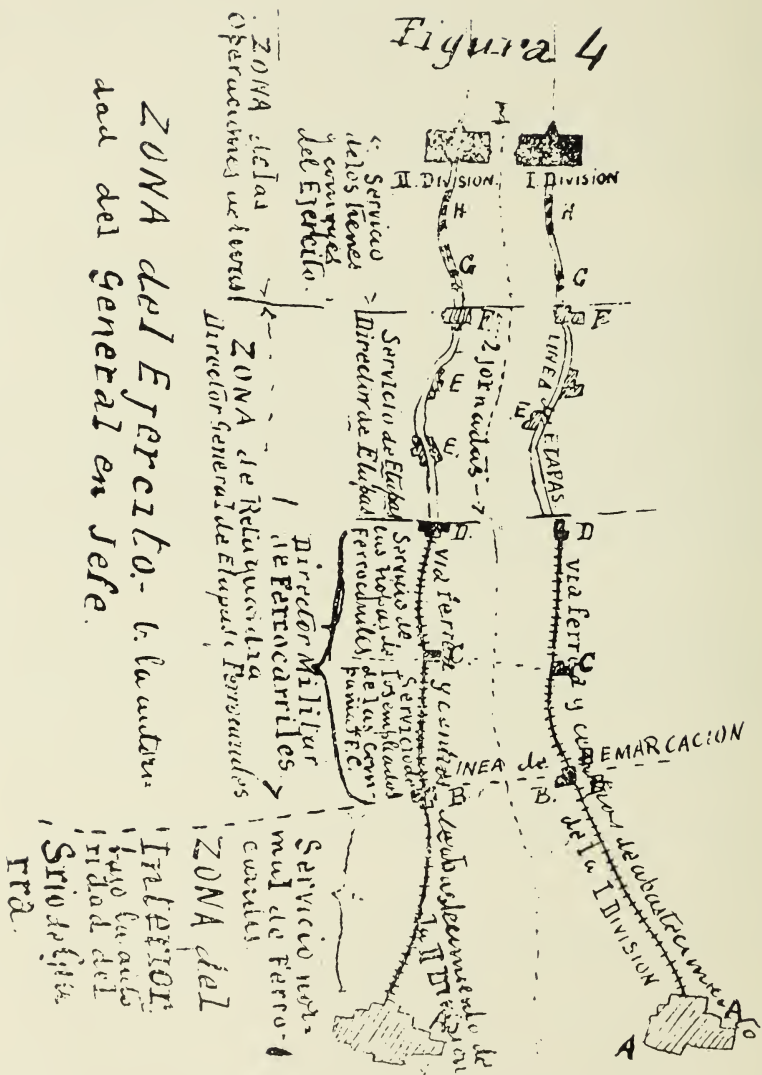
IDEAS CONCERNING THE EMPLOYMENT OF RAIL-ROADS IN WAR.*

TRANSLATED BY SECOND LIEUTENANT EMILE V. CUTRER,
ELEVENTH INFANTRY.

33. In time of war it is not possible that the service of the railroads conform to the same rules which govern them in time of peace. The necessity for avoiding an attack by the enemy against the defenseless troops while traveling, likewise the giving of security to traffic of the various effects which are transported by train (arms, am-

*From *Revista del Ejercito y Marina*.—Continued from September JOURNAL.

Figura 4



munition, war stores, provisions, etc.), is a service which requires its own organization, and it requires a special form by the fighting troops in the occupied territory; whereas, in the interior of the country which continues in complete security the habitual rules of the railroad are obeyed.

34. In the time of mobilization the supreme authority (among us the Secretary of War, by order of the President of the Republic), assigns to each one of the grand units of troops which are to enter the campaign (army corps, divisions, etc.), the railroad which is to be for its distinctive and exclusive use for the transportation of its troops in concentration and for carrying whatever supplies it may need and to return to the interior of the country the personnel and effects which are no longer serviceable. It is necessary that the network of railroads be supported, or what is the same thing, that several railroads converge toward the base of operation, and may be prolonged to a greater distance from that point into the territory occupied by each grand unit. On each one of said railroads the same authority determines a final station as far as which the service should be executed in conformity with the habitual rules and under the authority of the Secretary of War. The line which unites all of these stations is called the line of demarcation, and separates the zone of the interior in which reigns the authority of the Secretary of War from the zones in which the service of the roads remain, subject to the authority of the general-in-chief.

35. In the zone of the army the service of transportation, under the authority of the general-in-chief, is under the immediate direction of the director-general of railways and commissaries, and is in turn divided into two parts. In the strip nearest the zone of the interior the service of transportation is continued by rail to a distance of approximately two-days' march from the zone of operations and from here the convoys, which form a part of the army of operations, continue along the common roads carrying supplies direct to the army of operation. Within this first strip the service remains under the immediate command of the military director of railroads. The second strip nearer to the zone of the army contains a network of ways of communication, composed of common roads, canals, etc., by means of which the personnel and army supplies are transported from the advanced railroad stations to the points at which army convoy service commences and vice versa. The strip is under the immediate control of the director of supplies.

36. The railway service in the zone of the army is divided likewise by two lines parallel to the line of demarcation, or base of operations. In the first, near the line of demarcation, the service is executed by the employees of the railroad company as far as the station on each line designated by the general-in-chief. This station is called the station of transition. Between the stations of transition and the territory where supplies are hauled over common roads, the service of the railroads remains under the absolute control of military commissions, which direct the traffic, the railroad employees and telegraph operators, who execute the various duties of the service.

37. The last stations of railroads, at which terminate all transportation by rail, are called principal stations for war stores. Here are generally to be found great warehouses for the supplies which come from the interior of the country, and here are found waiting many means of transportation for those supplies, such as wagon trains, pack mules, launches, etc.

38. The chief stations for military supplies cannot, as will soon be

understood, be the same during the whole campaign. However, in view of the distance at which they should be found in rear of the army of operations, the general-in-chief designates, under the direction of a director-general of railroads and supplies, the line of stations of transit and the line of chief stations for war stores which may be most suitable, taking into consideration the military situations at each period of the campaign.

39. From the chief stations of war stores begins, properly speaking, the service of supplies which, as already indicated, consists in the organization of the different roads, with the object of facilitating the transportation of everything going to the army or coming from it. The army can proportion the occupied territory and the conservation of order in the same through the orderly working of so many useful elements.

40. On each one of the roads of the zone of supplies, between each one of the chief stations of war supplies and the last station of the line toward which the army convoys converge (which station is called chief road station of supplies), there is a chief of the line of stores, and in each important locality there is a chief of station of supplies.

41. At the chief stores along the road supplies are given directly to the convoys, which march with the troops and follow the columns at some distance with the object of replenishing the combat trains and transportation sections.

42. In Fig. 4, which is a simple representative outline, one can form a sufficiently clear idea of the conjunction and operation of the transportation which is used in time of war between the centers of supplies, situated in the interior of the country, and the chief supply stations which are found on the road in the field of operations near the fighting troops.

43. In order that the railway service may work well at the desired moment, it is necessary, among various other conditions, that the military staff should have studied and fixed with precision even to minor details the places, hours and units of embarkation on each line which it may think of using, and also the hours and stations of disembarking, etc.; that the engineer corps may be able to assure regularity of traffic and the greatest order in the working of the railroad; that the troops of the various arms may be able to execute with precision the operations of embarking and disembarking the personnel, animals and material in order that they may never obstruct one another; and it is the duty of the chiefs and officials who command troops to know these things in order that never, on their account, will an interruption of traffic be caused, as such an interruption of the transportation of troops by rail produces in military operations a calamity.

44. It is clear that, in order to use the railroads, it is absolutely necessary in every case to prevent the enemy from destroying the road or the rolling stock, and hence it is necessary, in the zone of operations, to have special troops on duty to guard them. In considering the transportation of troops, it is necessary that the stations of disembarking be covered at a sufficient distance in order that the enemy may not surprise the entrained troops and so it must be during disembarking, as in both cases the troops are unable to defend themselves.

45. To satisfy the conditions indicated in the previous paragraph, such protection is always essential, but when the concentration of an army along its base of supplies is considered, the matter is of such vital importance that upon it may depend the success of the whole campaign. If the enemy becomes concentrated in the zone of the stations

at which our troops are to disembark before we may have determined that operation, it will defeat the fractions already embarked, impede the disembarking of those who are en route and introduce, in this way, such confusion and disorder that it will be impossible to carry out the projected plan of campaign, and its defeat will be complete.

46. In view of the former, in order to guard against the fact that the enemy may be ready before us to pass the frontier, it will be necessary to choose the zone of concentration for our troops at some distance in the interior of the country and have it covered by a good position, which permits us to terminate with security the change from order of march to order of battle. If the enemy is ready, for example, seven days sooner than we are, it will be necessary for us to concentrate at a greater distance from the frontier than the distance which could be covered in seven-days' marching, some eight days of marching time, for example, and to seek there a good position toward which converge sufficient roads in order that the concentration of our troops might be made with facility. It is necessary, moreover, to destroy between said position and the enemy all the railways and roads which might facilitate the march of the enemy. This work should be mapped out, even the smallest details, and with every care, and should be done in time of peace in order to determine opportunely and in detail the marches by railroad toward the chosen zone of concentration.

47. The task of being able to complete a defensive plan with rapidity and precision (thanks to the proper employment of railroads) has been the cause of their being considered as very valuable instruments of war, more important perhaps than the permanent fortification, as these latter are immovable, and the enemy's troops can easily pass outside their zone of action; whereas the railroads permit the carrying of the greatest number of fighting troops at the necessary moment and with the greatest rapidity to the point where the greatest danger is threatened.

TRANSLATOR'S NOTE.

The foregoing article contains some ideas which would be of much value to our country in case we should become involved in a war where the theater of operations might lay within the borders of the United States, Canada or Mexico, for within these countries railroads are numerous and they would undoubtedly contribute largely toward our success if efficiently administered for war purposes.

Since most of our military efforts must be directed against enemies foreign to this country and our immediate neighbors, the employment of railroads in this country reduces itself to the simple matter of choosing a well-protected base or bases along the coast line toward which sufficient railroads converge for the necessary transportation of troops and supplies and from which a sufficient number of transports may be despatched, over sea, to such places where the active army may be engaged.

However, should we ever be called upon to drive out an enemy who had gained a foothold within the limits of the United States, the question of the selection of railroads which might lead to the theater of operations would become of vital importance. These roads could not provide transportation beyond a certain distance from the enemy, hence the necessity for an efficient system of wagon and pack transportation from the termination of the railroad to the theater of operations.

Railroads, in our country, are conducted on such a vast scale that their adjustment to meet the demands of the military is believed to be a more difficult problem than will be the question of embarking and disembarking the troops, with promptness, which may go to enter a campaign.

THE EMPLOYMENT OF RUSSIAN ARTILLERY IN MAN-
CHURIA.*

BY LIEUT.-GENERAL H. ROHNE, RETIRED.

II.

IT is useless to continue this examination any farther. It will suffice to remark that the methods here used suffice to explain the formidable lack of success on the part of the Russian artillery. Nor is the use of this process, by any means, a recommendation for the German artillery. I even find that the foregoing fails to prove the possibility of indirect fire by large units of artillery. The Russians who had no large amount of artillery at their disposal kept a large part of it in reserve and developed their troops over a large front. Thus it was possible to leave large intervals between the batteries brought into action and find emplacements favorable to observation in these intervals. But by reason of the considerable forces of artillery which would be seen on the European field of battle, the conditions would be sensibly different. It is to be hoped that in our country there will never be a decision to hold in retirement the best elements of artillery—that is to say, the battery commanders, as was done in the cases just examined.

We can appreciate the extenuating circumstances surrounding the Russian artillery. They were, in short, forced to have recourse to protected positions as a result of their cruel experiences in unprotected emplacements. But even this is no reason for artillery doing the same in future.

The adoption of shields has introduced a new element into the problem, because these shields have seriously diminished the effect of the enemy's shrapnel and prevents the rapid reduction of artillery so provided. Of course, all cover which presents itself must be used to advantage, but only on condition that the effect to be obtained shall not be lessened. As the fire from a protected position can nevertheless be practiced by certain isolated batteries, and as it requires a great deal of skill, it is indispensable that batteries be trained in it. It is not impossible, however, that real improvements may be brought to the process in question which will permit of its employment to advantage. Only we must not on principle consider protected positions as being the rule, nor always prefer them to semi-protected or exposed positions; artillery which would make absolute application of such a principle would expose itself without the least doubt to a fiasco even more complete than that of the Prussian artillery in 1866, in Bohemia and that of the Russian in Manchuria.

For some time there has been manifested in the Russian artillery a current of ideas unfavorable to the exaggerated employment of protected positions, and Colonel Bjelajew mentions a few ideas of this new category. Here, for example, is the opinion of Colonel Cavrilov, aide-de-camp to the Tsar, who took a distinguished part in the whole war and was regarded with the cross of the order of St. George: "Always," he writes to a companion, "there will be certain prejudices against which we must fight. But this bias is not a simple prejudice, but a

*Translated by Lieut. E. Santschi, Jr., from *International Revue*—Continued from September JOURNAL.

grave evil against which we must by all means contend. On the defensive positions can for a greater part be protected; in spite of this I have on many occasions chosen unprotected positions for defensive purposes. On the offensive, however, it will not always be possible to find masked positions. In the enterprise undertaken against the Japanese line of retreat during the Battle of Landepan, it was hardly possible to occupy masked positions. In the preference accorded masked positions the instinct of conservation plays the leading rôle to my idea, and under the influence of this instinct comes the conviction that it is impossible to act otherwise, and the effort is made to have others regard the matter in the same light. There is no doubt but that a battery in a masked position is very little menaced unless hostile observers established on the right or left can discover it, or unless it betrays itself by its own shells which may strike the mask and burst. The commander of the battery is not exposed at all, because the fire will always be directed against the battery itself, while the chief will tranquilly maintain himself to one side and give his orders by telephone. It will be the exception when a shot strays in his direction. In an unprotected position the captain places himself with his battery and shares the dangers of his personnel. I am a confirmed partisan of protected positions, but I think it absolutely necessary to combat the heresies now coming to light; otherwise in some future war when the necessity of attack presents itself we shall not know how to occupy unprotected positions. The heresies in question will shortly be seized by all artillerymen and gradually extend themselves until they permeate all grades. The consequence will be that the artillery will no longer be in front and that the infantry, after submitting to heavy losses, will be forced to retire without obtaining a success. In order to protect the personnel on exposed positions, the pieces should be supplied with shields and the men trained in serving the piece from sitting and kneeling positions; the interval between pieces should be extended to thirty paces as a minimum and trenches for the personnel should be constructed when there is time. It is not difficult to silence a battery posted in the open, but it is difficult to reduce artillery the moment the personnel knows how to protect itself, and for this it is only necessary that small trenches be dug or that the men simply lie down. The artillery which seeks above all else to establish itself under cover will always find itself separated from its infantry and will lose all contact with it. Without the aid of artillery, the infantry can only advance with difficulty and more often it cannot advance at all. To my mind, we will most often choose semi-protected or unprotected positions in the attack, and I am far from having mentioned all the inconveniences of masked fire, because it is necessary to understand the dead angles, as well as to overcome the difficulty of finding posts for the observation of fire of a large number of batteries."

Lieutenant-Colonel Fedorow, who during the Manchurian War commanded a battery of mortars, expresses the same opinion. It is to be remarked that the positions which assure good protection to the pieces, as well as to the movements of the advance train and the caissons, find themselves but rarely in proximity to the position of the infantry and the trenches constructed for the sharp-shooters on the principal position. More often the emplacements for the pieces are constructed one to one and one-half kilometers to the rear. The idea that an artillery position must be entirely sheltered from the view of the enemy gives rise to the other idea that a position is already menaced when it is perhaps possible to see it from the top of some large tree five kilometers

distant. This same idea is often the cause of a desire to refrain from opening fire for fear of disclosing the position of the battery by the flash of the pieces. When the position of the artillery is some distance in rear of the first heights, the observers must be sent forward some distance, often 1000 to 1500 meters from the position. Then there will be away from the battery either the battery commander, the observation officer or scouts taken from the list of non-commissioned officers. Each of these solutions presents grave inconveniences. The battery commander should see the ground in front; he should be able to follow the progress of the combat, and we must not lose sight of the fact that he must often make resolutions on his own responsibility. If he be away from his battery the rupture of a piece or some accident to the telephone can put the entire battery *hors de combat*. I have for my part seen such a case. And again, anything may happen in a battery when its chief is not directly occupied in its management.

It seems to me that these two officers who have the experience of war and who express so clearly their ideas in opposition to the views infecting the Russian artillery are as much qualified to give their opinions as are the most enthusiastic partisans of protected fire.

Bjelajew, contrary to expectations from views previously given, also declares that he is not absolutely a partisan of protected positions, and that to the contrary he thinks the employment of protected, semi-protected or open positions will depend on circumstances. The artillery, says he, should know how to renounce cover when the circumstances and the object of the action require it. The principle which says, "The effect of fire first, cover afterward," should constantly be borne in mind.

That is absolutely exact; only opinions differ greatly upon the point of knowing if and when it is possible to obtain sufficient effect from fire executed from cover. If, in combat, the technique constituted the only decisive factor there would be no doubt after the experiences of times of peace that the preference should be accorded to masked positions. But psychological factors must be taken into consideration. And it is precisely because of these that we must maintain the principle "that direction of fire and observation of hits must be made from the same position." In a fight from a prepared position or in a siege where everything is prepared beforehand, the direction of fire can be made from a post of observation somewhat distant by means of the telephone. Similarly in the batteries of heavy howitzers, which generally find themselves far enough in rear and are, moreover, removed from the fluctuations of the fight so that they have no need to exercise any but indirect fire, the matter can yet be done. But in a field campaign proper, above all, in a large battle where the guns are very close together, I think that the regular operation of a battery by telephone is a problematical matter. The experiences of peace times furnish no indications on this point. Moreover, in this method the battery commander would have to depend on his subalterns either for the observation of fire or maintenance of order in the battery. There is not always an abundance of officers capable of assuming these responsibilities in time of war, because of the great number of officers and non-commissioned officers chosen from the more experienced for duty with newly formed units, and also by reason of the great number of officer's patrols which the commanders must send on reconnaissance. If we think that the employment of masked positions is absolutely indispensable, we must also decide to equip the batteries with observation ladders to be carried on a specially constructed wagon.

The comments here given relative to masked positions represent the most interesting portions of Bjelajew's book. Other chapters treat of ranges, fire over friendly troops and the use of shields.

Bjelajew declares that at first sight it would seem that the experiences of the war indicated the utility of fire at long distances. During the preparatory stages the firing was almost always at $4\frac{1}{2}$ to 5 versts (4800-5300 meters) and more. The principal fight of the artillery developed at the same distances. The Russian artillery remained in its protected position, and the range only decreased with the advance of the Japanese infantry. It is a mistake, says the same author, to think that firing at such long ranges is a result of the progress in ballistics realized in modern arms. According to Bjelajew, it is due to the special conditions surrounding the war in Manchuria. The time fuse of the Russian shrapnel had a duration of fire 500 meters superior to that of the Japanese; on the other hand, the Japanese had a superiority of numbers. The Russians then had a considerable interest in opening the fire with their superior shrapnel at a distance where the Japanese could make no use of shrapnel supplied with the time fuse. Moreover, the Japanese fired a high explosive shell with which the Russians were not supplied, so that in the beginning there was an advantage in opening the combat at such distances that the Russians could not reach the Japanese with their time-fused shrapnel.

According to Bjelajew, fire at great distances presented the following inconveniences:

1st. It uncovered prematurely the position of the artillery;

2d. It did not give rapid and decisive results, and for that reason neither the infantry nor the artillery could make aught but an inexact idea of the powers of modern artillery;

3d. There was consequently a fearful consumption of ammunition. General Kuropatkin no less than eight times deplores this exaggerated consumption of ammunition by the artillery and recommended that it be husbanded because of the difficulty of resupply.

Evidently artillery must know how to fire at long ranges, but it must always strive to deliver fire at ranges which assure decisive results (2000-4000 meters).

Firing over friendly troops is possible, according to Bjelajew, when, on a plain, the distance of the objective is at least 1600-1700 meters. When the troops have arrived within 500 to 600 meters of the objective the fire should cease. On an undulating terrain, the conditions would naturally be different. Firing over friendly troops is often hindered by premature bursting, provoked by defective fuse. These unlucky burstings were often so numerous that the smoke produced by them prematurely disclosed the position of the battery to the enemy. According to divers reports, the Japanese artillery fire accompanied their infantry almost to the enemy's position, even at the risk of causing a few losses in the ranks because of shots falling short. The Russian officers, among them Colonel Novikow, stated in their reports that the infantry many times showed itself impressed by the friendly projectiles passing overhead—too close perhaps—and that they asked the artillery to cease firing. Many other troops in return have squarely demanded, and with insistence, that the fire of the artillery over them should be continued as long as possible.

The absence of shields on both sides has had such an influence on the use of artillery that the experiences gathered during the course of that war cannot be generalized. Everyone recalls with what energy and disdain Generals Dragomirow and Devorgitzki pronounced against

the use of shields. The former died before having an opportunity to see the disastrous consequences of his counsel, but the latter must bitterly repent the answer he made to the Tsar when the latter asked him his opinion on the employment of shields. Bjelajew cites the opinions of various artillerists on the point in question. Nearly all expressed themselves after the war in favor of an immediate adoption of shields. Colonel Lorwikowski alone was of a contrary opinion. He is of the opinion that a masked position which the enemy cannot discover constitutes a better protection than shields. There is no doubt of that, but the main thing is to obtain some sort of effect. When two batteries, one provided with shields and the other not, find themselves side by side, under identical conditions, be it masked or unmasked, it is evident that the one supplied with shields will not only be best protected, but will obtain the better results—at least, be it understood, that neither of the two be exposed to the enemy's fire. The veritable advantage of protective shields consists precisely in the fact that the batteries so provided need not preoccupy themselves so much with cover at the time of action when decisions must be made with rapidity. The best proof of the utility of shields seems to be that in this same war many batteries adopted shields which they themselves contrived and with which they were highly satisfied.

Although I am not in accord with the author on many points, notably those which concern the value of masked positions, I have read his book with much interest. He who can read between the lines and knows how to draw a conclusion therefrom understands after having read this work why the Russian artillery was due to make the fiasco in Manchuria which it did. To readers of this discourse, I recommend a thorough study of this book. Aside from the tardy adoption of new cannon, which neither the officers nor the men could understand thoroughly, the cause of the Russian artillery's unsuccess is principally due to the absence of protective shields, because this had for a consequence the preference given to protected positions, as well as firing at long ranges. These two things prevented the artillery from vigorously sustaining its infantry. And all this was aggravated by an irrational use of artillery, of which too great a part was always kept in reserve and even not used at all. Finally, the bad working of the time fuse did the rest in provoking premature explosions of a considerable number.

MAKING OF RIFLEMEN.

WHEN the Senate passed unanimously the bill appropriating \$100,000 for rifle practice in the schools and universities of the country and among civilian clubs, it took a step toward putting this country on a level with foreign nations in this encouragement.

There are at present ninety-three universities, colleges and schools where army officers are detailed and an enrolment in the military department of 22,910. These include the agricultural schools, which receive appropriations under the Morrill Act. Of this number only 3239 men receive outdoor instruction and 9748 gallery practice. In addition to these institutions there are twenty-eight private military schools with an approximate attendance of 2500. Through lack of proper facilities, such practice as they have is of little value.

An interesting exhibit of what is being done in other countries to

promote rifle practice among civilian and school clubs accompanied a report made by Senator Briggs.

In Canada the Dominion Rifle Association receives annually from the Canadian Government a subsidy of \$15,000, besides an allowance of 100,000 cartridges each year.

Great Britain donates each year to the National Rifle Association 500,000 rounds of cartridges for use in the annual contests at Bisley. The rifle association has an annual income, which last year was nearly \$100,000. Affiliated with the association are 200 minor associations and 1700 clubs. About 150 schools have cadet corps in which rifle practice is carried on, and each year there is a contest among the schools for a trophy presented by Lord Ashburton.

Australia has a reserve force of 50,000 civilian riflemen and appropriates \$500,000 annually for ammunition for their practice. The railroads in Australia give free transportation to members of the rifle clubs when traveling to and from the ranges. Forty thousand school-boys are organized into cadet corps.

In France the government issues rifles free to the rifle clubs, and last year the free issue of ammunition to such clubs cost the government \$100,000. The departments co-operate in the teaching of rifle practice to the children. The War Department helps with arms and ammunition, the Department of the Interior with money and the Department of Public Instruction by encouraging the development of rifle exercises in the schools.

The Italian Government in 1882 organized an association to teach all citizens to handle the military rifle. This organization is under the supervision of the Secretary of War. Total or partial exemption from military duty is given to members of the rifle clubs who have profitably taken shooting lessons for two years.

The day for practice is always Sunday, so the workingmen can attend the meetings without losing a day's work. A military instructor is in charge to teach the rules of shooting, care of the rifle and individual and company drill. Every year there are community matches, every two years inter-county matches and every five years a national civilian match. This match is generally held in Rome, and the occasion is a popular holiday. In the last match, which lasted fifteen days, about 30,000 men took part. The list of prizes had among the donors the King and Queen, Members of Parliament, the cities, the counties, the government, the nobility and others.

In Switzerland there are more than 3600 shooting societies, with more than 200,000 members. In 1902 84,309 members qualified as marksmen. If the same ratio were maintained in proportion to population the United States would have 4,280,000 marksmen.

Sweden annually appropriates \$153,780 toward rifle practice. In 1905 there were 1850 rifle clubs in Sweden.

FOREIGN ARMY NOTES.

German Marching. The imperial maneuvers ended to-day (Sept. 10) with a grand exhibition of powder burning by the artillery, machine-guns and infantry that continued for three hours, over a sixteen-mile area. The Red invaders, theoretically the Russian Army, with slightly inferior forces, won, cutting off one division of the Blues, the German defenders. When the firing ceased Emperor William assembled

200 of the higher officers and gave them a forty-five minute criticism of the operations.

It was a fine autumn morning and the final battle afforded a brilliant spectacle for the people of the countryside and automobile parties from two provinces. The foreign observers expressed amazement at the marching endurance of the troops, some of whom did upwards of forty miles in twelve hours, being relieved of their knapsacks which were carried in wagons.

A portion of the troops were uniformed in the new service gray and blue, which has much the same neutral blend as the sheets in which the hill tribesmen of Northwest India wrap themselves for their night raids. The cavalymen leading their horses through the morning mist were invisible, but the animals could be plainly discerned as a detachment passed the gray hillside in the half light and disappeared.

Field cooking wagons, each with two compartments holding 90 quarts of soup and 60 quarts of coffee, were stationed near the firing line, and at these the troops were frequently refreshed in the course of the action. The Emperor moved from place to place during a portion of one day, and tasted the soup prepared for his soldiers.

The commanders of both armies reported officially that they were greatly assisted on the first day of the mimic warfare by the observations made by the crews of the dirigible balloons.—*N. Y. Herald*.

The New Chinese Army. Dr. Morrison, the correspondent of the London *Times* at Peking, who is journeying in central China, says, in a letter from Sianfu: "Probably the greatest change observable in modern China is the honor shown now to the formerly despised military profession. In many ways is honor shown: in improved pay with consequent improvement in discipline and higher *esprit de corps*, in the high commands sought for by imperial princes, in the revolution which has reversed the corresponding ranks of civil and military officials and has awarded to the military a scale of dignities compared with the civil that a few years ago would have been deemed impossible. Military rank may come to supersede civil rank in the aspirations of the ambitious. Soldiers now are proud of their uniforms, they keep their rifles clean, they are smart and respectful—always, of course, comparing them with the Chinese soldiers as we knew them a few years ago. Soldiers now demand that they be treated with consideration by their own authorities. Officers travel on the train first-class; the rank and file will not suffer themselves to be herded as before like cattle in open trucks; they now require covered carriages in which they can sit with comfort. It is a noticeable change. The contempt which the regular soldier displays for the untrained brave is not less than the contempt entertained by the foreigner for the same slovenly object."

Turkish Troops in Albania. A special correspondent of a London paper writes favorably of the condition and quality of the Turkish troops in Albania. Speaking of certain Redif battalions from Anatolia, he says: "There is little or no uniformity in the matter of footgear, the rolled cloaks are attached to the shoulder with homely string, and two nights in the train had been too much for the sewing of many of the buttons of the contract serge. But every Mauser would have passed the most critical inspection for cleanliness, every man was carrying 100 rounds in a double bandolier round his waist, and every man of the 900 in each battalion was of good physique and in the prime of life. It was one of these same Redif battalions which three days after it detrained

at railhead went up the forest-grown slopes of Tchernolova with fixed bayonets with the élan and agility of Gurkha riflemen. Describing the Nizam battalions from Adrianopole and Stambul, the same observer remarks: "As the reserves have not been called up, these battalions are only at peace strength—that is, 400 rifles. But they are well turned out in every detail. The head dress is a khaki kalpak. Ali Riza Pasha, the late minister of war, tried to introduce a shako, so as to give the soldier the advantage of a shade to his eyes. But this was too revolutionary even for the Revolution. The footgear is not yet uniform throughout the active army. Some battalions wear boots and khaki puttees; others maintain the serviceable felt stocking and leather sandal of the country. The rest of the equipment is uniform and complete. Each company is commanded by a young man, and has its complement of smart young subaltern officers."

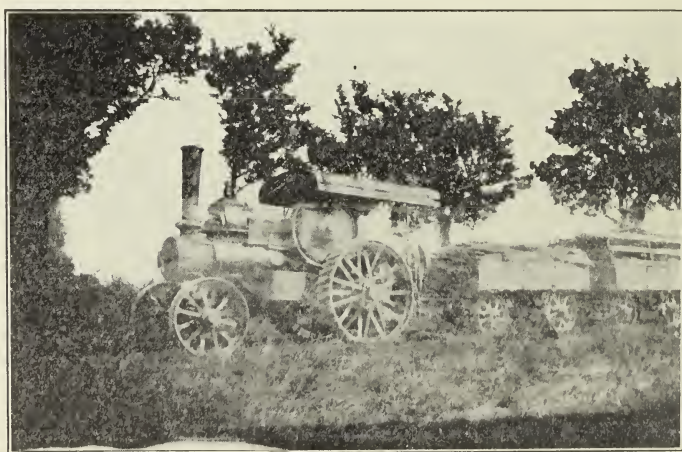
The Swiss Army. Col. Sprecher de Berness, chief of the staff of the Swiss Federal Army, has been explaining to the officers the new organization of the forces which has been presented to the Chambers. He showed the objections to the Army Corps organization, saying that the campaign in Manchuria had proved that it would be better for a small army to operate only with divisions grouped for the needs of the moment. A divisional organization, analogous to that adopted in the British Army, is therefore proposed for the Swiss forces. There will be six divisions, each comprising three brigades of infantry, two squadrons of cavalry, twelve field-batteries and two of field-howitzers, a battalion of sappers, three machine-gun companies and other troops. Col. Sprecher added, at the close of the conference, that the object of the new organization was to make the Swiss Army essentially an offensive instrument, according to the spirit of all tactics. "The whole army must be penetrated with the principles that the best means to defend is to attack. It is the principle which has given our fathers brilliant victories, and we are certain that in the hour of danger we shall be worthy of them." Evidently the Federal Army is taking on a new organization, and with its more extended training is likely to become a more effective force.

Aerial Torpedoes. The Unge torpedo, intended for the destruction of balloons, has acquired an increased importance since Messrs. Krupp have bought up the patent rights. The new projectile is an improved version of Hale's war rocket, once used in the British Army. Its special advantage for firing at balloons lies in the fact that its trajectory is clearly visible by night or by day, enabling the aim to be readily corrected. The inventor's efforts have been directed towards the improvement of the accuracy of the rocket, which used to be a very variable quantity. The rocket is fired from a light rifled gun, which gives it an initial rotation; this is maintained by the powder gases, produced by the burning of the composition, which escape through helical channels. The latter are connected to a central reservoir, the effect of which is to equalize the pressure of the gases. A tapering hole is made down the center of the composition, the diameter of which is so regulated that the composition near the base burns away first. The composition consists of different grades of powder inserted in successive layers, so that it burns faster as the rocket gathers speed, and as the air-pressure behind it is reduced. The head of the rocket is a high-explosive shell, with a sensitive fuse designed to act on touching the envelope of a balloon. The whole torpedo weighs 40 lbs. if made of the smallest size proposed,

namely, 4 inches in diameter, and the gun from which it is fired weighs 140 lbs. complete. A dirigible like the new German M III. can carry twelve of these torpedoes, with the gun, in addition to its crew, and this armament would render it a formidable antagonist to any other war balloon.—*Army and Navy Gazette*.

A New Army Bread. A considerable quantity of a new kind of army bread, or rather biscuit, is being tried in the French Army. In July, 1909, 60 quintals of this bread, manufactured at the Debilly bakery, were placed in a special receptacle, and are this month being issued, after a year's storage, to certain troops of the Paris garrison. In order to enable a comparison to be established between the old bread and the new both kinds will be issued to the troops. The first report shows that the new variety of bread is superior to the regulation type. It is eaten either as it has been prepared or soaked in milk, wine or coffee. It will replace fresh bread after having been soaked two minutes in water and then immediately dried, by preference in a slow oven. It can be used according to the French soldier's fashion in soup and different other preparations. Further reports are to be presented upon its qualities. The purpose is, of course, to make it possible to have always at hand great supplies of food ready to be used on campaign.

The Sultan of Sulu claims descent from that valiant Dyak Borneo chief Paguian Tindig, who, early in the sixteenth century, conquered the Sulu archipelago, founded the Sultanate and opened the way for the introduction therein of the religion of the great Prophet. This Sultanate, politically regarded as an integral part of the Philippines, came into the possession of the United States as the result of the Spanish-American War. Under the old régime this group of about 140 islands constituted a vassal domain in the suzerainty of the King of Spain.



of military law, and was made to suffer for his insistence of his rights, was relieved from his duty as commandant of cadets and ordered to his regiment. In the end, however, he was understood, and was restored to his position.

This trait in his character, which made him appear insubordinate, was soon to lead him to unbelief in the religion of his ancestors, and we, therefore, find him searching for "the truth" through all of his after years, and the work as a military work is marred by the constant interjection of matter referring to his researches in this field of thought.

In that portion of the narrative which treats of the trials of General Scott and the action of the President and General Marcy, the Secretary of War, in depreciating General Scott's services *for a purpose*, Colonel Hitchcock makes a clear case for General Scott, and gives, at the same time, that which has for years been the accepted version of this most disgraceful transaction that has had the support of the President and Secretary of War in all of our history.

At this time Lieutenant-Colonel Hitchcock took a bold stand and published in the *New York Courier and Enquirer*, the leading Whig paper, a correct statement of the condition of affairs in the Army under General Scott, and his letters had a telling effect.

The whole diary of the events of the campaign in Mexico is of much interest, and a careful comparison of it with our histories of that war adds to our confidence in the judgment and capability of the Inspector-General of the Army.

Colonel Hitchcock was present at the dinner given by General Scott to the more prominent officers of the Army in Mexico, on which occasion General Scott gave his often-quoted toast to the United States Military Academy, and declared that "the Army four times multiplied would never have forced its way into Mexico but for the science and skill from the Academy."

All of this is, however, well-known past history.

The Government showed its confidence in the legal abilities of the Colonel when it placed him on the Board to settle the rank among army officers after his return to New York in 1850 from his tour of Europe.

The interest of the few, now living, who took part in the War of the Rebellion will center on that portion of this book which relates to the part General Hitchcock was forced to take when, in spite of his continued protest against his being returned to the United States Army, he was appointed a major-general of volunteers and assigned to duty in the office of the Secretary of War and designated the military adviser of the President of the United States.

General Hitchcock states that he had been offered command of the Army of the Potomac, but, after visiting General McClellan at his headquarters at Harrison's Landing, declined the offer; that he was then offered the command of General Grant's army, and declined that offer; that then he consented to serve as military adviser, and became in course of time the Commissary-General of Prisoners.

All of this is interesting history, but we must be allowed to express the opinion that it was most wise in the General to adopt the course he took. His health was not good and his sudden assumption of command would not have given strength to either of our armies in the field. Men in active service did not have much respect for the Advisory Board in Washington.

A. S. W.

Manual of Tropical Medicine.*

WITH our invasion of the tropics we were made to realize at once that the price of safety is eternal sanitation. To eliminate disease it is necessary that we should know its cause, so the study of "tropical" diseases, of necessity, now looms large in our medical work. The most recent book on this subject, in spite of the authors' attempt to keep it "as small as possible" indicates in its 1269 pages what there is to know about so-called tropical medicine.

The public interest in this subject lies in the questions, are these affections really "tropical" and are we of the temperate zone safe from them?

Manson, to whom our authors dedicate their book as the "founder of scientific tropical medicine," writes, "If by 'tropical diseases' be meant diseases peculiar to and confined to the tropics, then half a dozen pages might suffice for their description, for at most only two or three comparatively unimportant diseases strictly deserve that title. If, on the other hand, the expression 'tropical diseases' be held to include all diseases occurring in the tropics, then the work would require to cover almost the entire range of medicine; for the diseases of temperate climates are also, and in almost every instance, to be found in tropical climates."

The interest awakened, chiefly through the admirable work of our own army medical officers, in the manifestations of disease in hot climates, is already bearing fruit for the benefit of our citizens, as instanced in the elimination of yellow fever, the campaign against uncinariasis and the investigation into the causes of pellagra, etc.

Doubtless there are other diseases existent among us, now more or less obscure, the character of which will ultimately be determined by the study of correlated affections, which more frankly manifest themselves under the meteorological conditions about the equator.

Hence it is that the community, as well as the medical profession, is indebted to Drs. Castellani and Chalmers for the excellent exposition of their work in diseases in tropical countries.

J. V. R. H.

History of the "Confederate War."†

THE great war of '61-'65 is declared to have been a "public" and not a "civil" war; "otherwise the entire attitude of the Federal Government toward its antagonist must be inexplicable, inconsistent and wanting in dignity." "The United States Government itself made * * * recognition of the South's status as a power possessing the right to make war." "Under the advice of General Lee and their other great leaders, the soldiers of the Confederacy accepted the surrender of the Confederate armies as a sovereign act that made an end not only of the war, but of their right to make war. By their immediate return to ways of peace and by their sincere acceptance of the terms offered in Mr. Lincoln's promptly issued amnesty proclamation they marked and emphasized their view that they had been engaged, not

**Manual of Tropical Medicine*.—Castellani and Chalmers. (New York.) Wm. Wood & Co., 1910.

†*The History of the Confederate War, its Causes and its Conduct*. By George Cary Egges-ton. (New York.) Sturgis & Walton Co., 1910.

in a disorderly insurrection, but in a legitimate public war, the military end of which marked the end of their right to carry on hostilities of any kind or character."

What caused the war? "It is easy to say that the war of 1861-'65 grew out of slavery"—from which it may be inferred that the author believes other causes to have been predominant. Yet, after following at length the growth of the national idea from the earliest period of our history, he arrives at the "irrepressible conflict," which is nothing more nor less than the slavery question. This he carries through the annexation of Texas, the Compromise of 1850, the Kansas War, the Dred Scott Decision and kindred points of controversy, to the almost inevitable conclusion, not stated in exact terms, that slavery was the underlying cause.

In the conduct of the war the "pepper-box" strategy was due to the lack, at the beginning, of a proper understanding of the military necessities of the situation. So many political generals had to be supplied with employment, and the military training of the American people had been so neglected that almost childish efforts were the first fruits of an attempt at campaigning. Concentrated and united action was entirely lacking. Discipline was an unknown quantity. "This victory (Bull Run), the completest, the most picturesque, the most absolute that could be imagined, had the effect of paralyzing the winners of it to an extent which even defeat could not have done."

General Grant is greatly admired, and correspondingly his detractors, especially Halleck, receive scant consideration. In the case of the latter entirely too much space is devoted to belaboring him. The author's remarks savor of prejudice which does not seem altogether fair in an impartial historian. Fewer pages of disparagement would have as effectively disposed of a career not altogether creditable. At times the references descend to the level of a sneer. Whatever may be an author's opinion of an historical personage, sneering does not improve the value of the recorded views.

McClellan, when measured alongside of Grant, receives about the same estimation as that given him by most historians. He gets due credit for a splendid organizing ability, and a certain amount of fighting stamina which was developed on the Peninsula.

Mr. Lincoln's perplexing difficulties, political as well as military, brought out the highest qualities of that great man, and he is appreciated and lauded.

The record of military events is, on the whole, well put and correct, with the possible exception of certain minor statements that do not affect the presentation of the main features of the story.

O. E. HUNT,
Captain, Thirtieth Infantry.

Philippine Impressions.*

MR. FEE has succeeded in writing a detailed account of the life and doings of the Filipinos in a very happy and conversational way that holds the reader's interest from beginning to end of this delightful book, making one feel very well acquainted with "our brown brothers" and their country. The book contains a number of half-tone illustrations.

F. S. J.

* *A Woman's Impressions of the Philippines.*—By Mary H. Fee. (Chicago.) A. C. McClurg & Co., 1910.

Troop Leading and Sanitary Service.*

WE are told by a distinguished military authority that the system of removing the sick from the immediate theater of military operations "forms the basis of the entire medical service in the field."

We learned this most important fact through dearly-bought experience in our Civil War (during which Letterman introduced the method of Larrey and Percy of the Napoleonic era), and after three years of tribulation, in the fourth evolved an efficient method of evacuation of wounded. Straightway we then proceeded to forget it.

The Spanish-American War produced no great battles with their hundreds of wounded, so that this phase of the duty of the medical service did not present itself and, consequently, no practical knowledge of it existed in our Army.

Some there were who realized the importance of this function of the Medical Department and that it required exact military execution, for which special training was necessary. But these were few and their influence served only to keep alive in the unresponsive minds of their fellows the unacceptable fact that the Medical Department is an important *military* asset in an army.

Recently, with the extension of the scope of military education and profounder study of the military art, thoughtful officers have come to realize the real function of the Medical Department in campaigns and are constrained to admit the necessity of regarding it from a tactical as well as sanitary standpoint.

Just now there has come to hand from the schools at Fort Leavenworth "A Study in Troop Leading and Management of the Sanitary Service in War," the joint production of Major Morrison of the General Staff and Major Munson of the Medical Corps. This work is the most instructive exposition of the tactical correlation of the destructive and constructive forces of a battle that the writer has seen.

War having been declared between States, one of whose boundaries is the Missouri River, a division of the Eastern Army seized and fortified Leavenworth, while a division of the Western Army, moving eastward, had gone into camp a few miles west of Leavenworth.

The military situation resolved itself into a conflict between two divisions and the object of the book is to illustrate, coincidentally, troop leading and the management of the sanitary service of a division in battle.

By orders, written and verbal, Major Morrison describes the preliminaries and progress of the battle, showing the team play of each commander from the major-general down to the squad leader, while Major Munson, in graphic language, tells what the Sanitary Department must do under the conditions of the problem.

Nothing yet written equals Munson's exposition of the field duties of the various administrative medical officers and sanitary formations, while in the telling he has made his subject as interesting as a novel.

The authors' belief that there is a very real educational need for a work of this character, especially in our country, cannot be controverted, and it is hoped that not only every officer, but intelligent people generally, will read and study this admirable book.

J. V. R. H.

*245 pages, with map, bound in cloth; price, \$1.25 Agent U. S. Cavalry Association, Fort Leavenworth, Kansas.

The de Trobriand Memoirs.*

THERE are few military memoirs more entertaining than these which the daughter of the late General de Trobriand has prepared.

The task of a foreign-born soldier in the Army of the United States during the time of the Civil War was not an easy one. Men of ability, courage and steadfastness were unable to complete their careers as they had hoped, handicapped as they were by lack of knowledge of American ways; de Trobriand was a marked exception. His sagacity, tact and wonderful command of language, as well as his soldierly qualities, were equal to all emergencies, and he continued in the Army after a successful war career until 1879, when he was retired.

To enjoy these pages, one must read French, because half of it is in that language—indeed, a large part of what is most delightful and entertaining.

General de Trobriand was the eldest son of an officer of Napoleon's army, Joseph de Trobriand, who married rather late in life, was at one time Department Commander of l'Eure and la Seine Inférieure, with headquarters at Rouen, and had a good war record.

The son came to America in 1841, a talented young man of twenty-five, and won the hand of Mary Mason Jones, the daughter of Isaac Jones, then President of the Chemical Bank. A few years were spent abroad and, in 1848, they returned to New York, where, excepting for the period between 1851 and 1854, he lived until the outbreak of the Civil War.

The General's education had been so liberal, his associations with the unfortunate members of the deposed Orleans family and the life of the Court so intimate, and his literary skill and success and his accomplishments as a painter and musician, had made such a name for him that he was a very prominent member of society in New York. He was a great friend of Masseras, proprietor and editor of the *Courier des Etats Unis*, and for years he was joint editor of and contributed critiques of all kinds to that paper.

On the outbreak of the war, he was elected Colonel of the Garde La Fayette, the French militia organization of New York, which shortly thereafter became the Fifty-fifth New York Volunteers, of which he was duly commissioned Colonel. He commanded the regiment through the Peninsular Campaign of 1862, and when the Fifty-fifth and Thirty-eighth New York Volunteers were consolidated in November, 1862, General de Trobriand continued in the command.

His fortunes took him through Chancellorsville and Gettysburg in 1863, as part of the Third Corps, as Brigade Commander, but not receiving his promotion, he requested to be "mustered out" until his promotion should be accorded. It came promptly, however, for he was nominated Brigadier-General in January, 1864, and he was assigned to duty in New York Harbor for a short time, and thence to the Army of the Potomac, and he was in active command until the surrender at Appomattox.

De Trobriand was a most fluent and agreeable writer; his accounts of theatrical and musical events in New York between 1850 and 1860, his correspondence with artists and prominent people are copiously reproduced and are most entertaining. The letters which he wrote to his

**The Life and Memoirs of Comte Régis de Trobriand*, Major General, U. S. A., by his daughter Marie Caroline (Mrs. Charles Alfred) Post. N. Y., E. P. Dutton & Company, 1910; pp. 5 29

mother-in-law, before 1848, are vivid word pictures of the life and experiences of the young couple at the Court of the Archduke Frederic of Austria, and at the simulated Court of the Bourbons of France at Venice.

The story of the General's life and the extracts from his writings before the military period is reached, comprise over two hundred pages of the book, and the remainder is replete with letters and details of his war experiences and later travels, commands and personal experiences.

The war letters were written to his daughter, and they are indeed examples of vivacity, affection and color. C. E. L.

Songs of the Service.

THE EDITOR takes pleasure in calling the attention of readers of the JOURNAL to the following circular letter to the Army, Navy, Marine Corps and Organized Militia:

FORT BAYARD, NEW MEXICO,
July 20, 1910.

DEAR SIR: Believing it would be of interest and value to the service in general, I am attempting to compile a volume of "Songs of the Service," to include such as are known by and of value to a considerable part of the Army. Those intended only for special occasions, or that endure but for a day, cannot be included, but if your regiment has any claimed by it as its own, or of a lasting interest, I would like you to send me the words and, if possible, enough of the notes to indicate the air. Please indicate any adopted as regimental songs or airs, and give name of author, if known.

Very sincerely,
CELWYN E. HAMPTON,
Captain, 21st Infantry.

In sympathy with Captain Hampton's movement we reprint the following contribution to the Boston *Sunday Globe* from Col. John H. Calef, U. S. A. (retired):

TO THE EDITOR OF THE GLOBE: On reading the editorial leader in your morning issue of the 15th inst., under the caption of "The Heavenly Maid," setting forth the influence of music and quoting from President Eliot's remarks to the Choral Symphony Union, my memory was carried back to a day 45 years ago when I was a young artillery officer just out of West Point.

My battery was serving with the Fifth Corps (Fitz John Porter's), Army of the Potomac, and we had just emerged from the heartrending, disastrous Bull Run campaign of August, 1862, in which battle I had witnessed my captain's (Smead) head carried away by a cannon ball while talking to me.

On the day referred to we were en route for the battle-field of South Mountain, the soft September breezes bringing to our ears dropping shots, the ominous sounds from the advance guard that the enemy has been sighted.

As we sat on our horses at the head of the battery waiting to take our assigned place in the column, our attention was drawn to the sound of singing, apparently by a large glee club, evidently belonging to some approaching regiment. Such proved to be the case,

and as they swung along past the battery we discovered the regiment to be the Fifth New York, a zouave regiment, known also as the Seventeenth Brooklyn, and commanded by Col. G. K. Warren, afterwards major-general, and who rose to the command of that very corps.

The song they were so heartily pouring forth as to make the welkin ring was one popular in those days around the campfires, and which many a veteran will remember as "Annie of the Vale," in which song said Annie is besought to

Come, come, come, love, come,
Come ere the night torches pale;
Come forth in thy beauty, thou marvel of duty;
Sweet Annie, dear Annie of the vale.

Only a few days before, August 30th, I had seen that regiment decimated in the battle of Bull Run. They occupied a prominent position on the left of the Warrenton pike and when Longstreet made his attack in the afternoon of the 30th he sent a whole brigade against Warren's regiment. Their red trousers and fezes made only too good targets, and the slaughter was fearful.

From the position of my battery (which was not at that time engaged) on the other side of the pike, this attack was plainly seen, and I recall my apprehension for Warren, who was conspicuous on a white horse, and I expected momentarily to see him go down, but he miraculously escaped.

He had been my instructor at West Point, and during our retirement to the defenses of Washington, a couple of days after, he joined me on the march with the inquiry, "Well, Calef, what do you think of war now?" to which I replied that, having brought the peninsula sickness away with me, having my captain shot by my side, and participating in a rout, my impressions were decidedly unfavorable. He then said if he "ever had to go through such another miserably conducted campaign he hoped he wouldn't come out of it alive."

The events preceding had been certainly very depressing, but here were these men of the zouaves, just out of one battle with such heavy loss, approaching another with song upon their lips as though going to a frolic. "They sang of love, and not of fame," and no doubt "each heart recalled a different name," as did they who sang "Annie Laurie" in Bayard Taylor's immortal verses, "The Song of the Camp." They forgot the horrors of Bull Run, their hearts and thoughts were of home, with all that word implied, and they were indifferent to coming events.

On looking up Colonel Warren's report of the Bull Run battle I find the loss of his regiment, Fifth New York Zouaves, to be over 60 per cent. in killed and wounded, which challenges the loss of any one regiment in a single engagement during the Civil War.

A glee club in a military organization is certainly a great element, conducive to comradeship and contentment, and oblivion of the ills and woes of a soldier's life. It is pleasing to the singer as well as the listener, surely exercises a refining influence, and is well in accord with all that President Eliot said to the Choral Union, and the approving comments of the *Globe*.

Literary Note.

WILLIAM JAMES, who died August 26, 1910, was the most distinguished professor of Harvard University. Almost his last public utterance, "The Moral Equivalent of War," is reprinted in this JOURNAL. The *Springfield Republican* says of Professor James: "His death removes the most distinguished and influential American philosopher of our day. Others may have made more brilliant and enduring contributions to thought; it was the distinction of James to stand in the front rank in many important fields of investigation and to convert the results to the use of humanity. . . . His service to science was great, but the man was greater than his work. . . . It will probably be the consensus of European opinion, not that he was the greatest American scholar, but that he was the greatest American of his time."

Our Exchanges.

American Society of Civil Engineers (to date).
Army and Navy Journal (to date).
Army and Navy Chronicle (London) (October, 1910).
Artilleristische Monatshefte (to date).
Artilleri-Tidskrift (to date).
Arms and the Man (to date).
Bulletin American Geographical Society (October, 1910).
Current Literature (October, 1910).
Journal of the Association of Military Surgeons (October, 1910).
Journal of the Royal Artillery (October, 1910).
Journal of the U. S. Artillery (September and October, 1910).
Journal of the U. S. Cavalry Association (September, 1910).
Journal of the U. S. Infantry Association (September, 1910).
Journal of the Royal U. S. Institution (October, 1910).
Journal U. S. Institution of India (October, 1910).
Journal of the Western Society of Engineers (October, 1910).
La Revue Technique (to date).
La Belgique Militaire (to date).
Our State Army and Navy (Penna.) (to date).
Pennsylvania Mag. of Hist. and Biog. (October, 1910).
Political Science Quarterly (September, 1910).
Proceedings of the U. S. Naval Institute (September, 1910).
Professional Memoirs, Corps of Engs., U. S. A. (to date).
Review of Reviews (to date).
Revista di Artiglieria e Genio. (to date).
Revista Del Ejercito Y Marina (October, 1910).
Revue de l'Armee Belge (to date).
Revue Militaire (to date).
Revue Artillerie (to date).
Royal Engineers' Journal (to date).
The Army Service Corps Quarterly (to date).
The Arrow, Indian Industrial School (to date).
The Cavalry Journal (London) (October, 1910).
The Century Magazine (to date).
The District Call (to date).

The Red Man (June, 1910).
The Medical Record (to date).
The Pennsylvania German (October, 1910).
The Popular Science Monthly (October, 1910).
The Scientific American (to date).
The Seventh Regiment Gazette (to date).
United Service Gazette (London) (October, 1910).
United Service Magazine (London) (October, 1910).

Books Received for Library and Review.

Night Operations for Infantry. Compiled for the use of company officers by Col. C. T. Dawkins, C. M. G., A. Q. M. G., Eastern Command. (London.) Gale & Polden, Ltd., 1910

The Mississippi Valley, Tennessee, Georgia, Alabama, 1861-64. Papers of the Military Historical Society of Massachusetts. Volume VIII. The Military Historical Society of Massachusetts, 1910.

The Campaign of Chancellorsville. A strategic and tactical study. By John Bigelow, Jr., Major U. S. Army, retired. With maps and plans. (New Haven.) Yale University Press, 1910.

Map Maneuvers and Tactical Rides. By Farrand Sayre, Captain and Adjutant, Eighth Cavalry. Third edition. Adopted for use in the Army Service Schools. (Fort Leavenworth, Kan.) 1910.

Napoleon's European Campaigns, 1796-1815. Compiled by Capt. F. W. O. Maycock, D. S. O. The Suffolk Regiment. (London.) Gale & Polden, Ltd., 1910.

Synopsis of the Field Service Regulations. Parts 1 and 2. For examination purposes. Compiled by Capt. Murray Muirhead, R. F. A. (London.) Gale & Polden, Ltd., 1910.

A Soldier's Recollections. Leaves from the diary of a young Confederate. By Randolph H. McKim, Late First Lieutenant and A. D. C., Third Brigade, Johnston's Division, Army of Northern Virginia. (New York.) Longmans, Green & Co., 1910.

Organization, Administration and Equipment Made Easy. By Lieut.-Col. S. T. Banning, Late Royal Munster Fusiliers. Tenth edition. (London.) Gale & Polden, Ltd., 1910.

A Study in Troop Leading and Management of the Sanitary Service in War. By Major John F. Morrison, General Staff, U. S. Army, and Major Edward L. Munson, Medical Corps, U. S. Army. Published by authority of the War Department. (Fort Leavenworth), 1910.

ERRATA.

In September-October Instalment of "Regular Army in Civil War."

Page 260—Fifth line from bottom, insert "were employed" after Clarke.

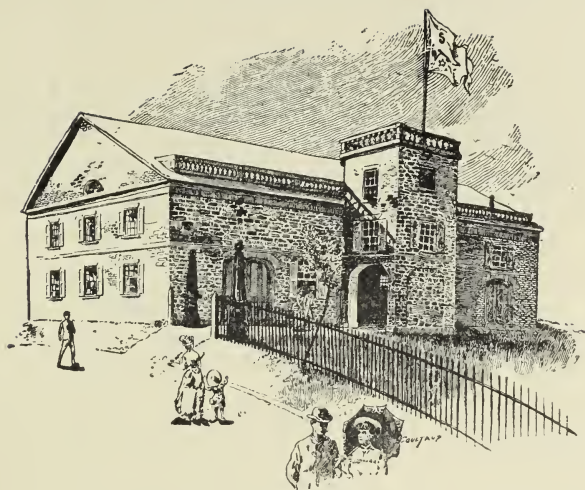
Page 264—Twentieth line from bottom, "Traino" should read *Triune*.

Page 265—Twentieth line from top, "Bucher" should be *Beecher*.

Page 267—Twenty-second line from top, insert "in which" after condition, which should end with a parenthesis, the first bracket being interposed between "difficulties" and "when" three lines above.

Page 271—Second line from bottom, "reputed" should read *reported*.

Page 272—The last word in article should be *Amissville* instead of "Annisville" as given.



THE MUSEUM OF THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES,
GOVERNOR'S ISLAND, NEW YORK HARBOR.

Editor's Bulletin.

Prize
Subjects,
1910.

THE subjects selected for the Gold and Silver Medals, the Seaman and the Reeve Memorial Prizes for the current year are worthy of the attention of both readers of and contributors to the contents of this JOURNAL.

Commit-
tee on
Nomina-
tions.

At a meeting of the Executive Council, October 13, 1910, the following Resolutions were adopted:

Resolved, That a Committee of three members of Council (excepting class of 1911) be appointed to nominate candidates to fill offices vacated by law on the second Wednesday in January, 1911.

Committee—Col. George Andrews, A. G., Col. W. M. Black, C. E., and Col. W. B. Hotchkin, N. G., N. Y.

Amend
Gold
Medal
Rules.

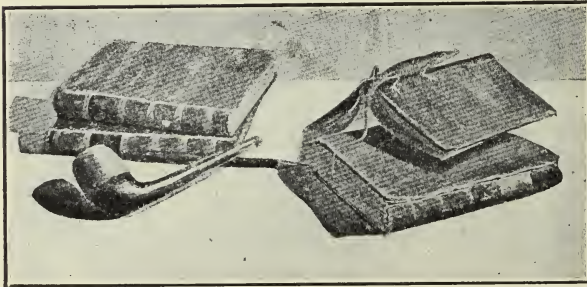
Resolved, That from and after January 1, 1911, the Silver Medal Prize of \$50 shall cease, and the first paragraph of the Rules for award of the Gold Medal Prize, line five, is hereby amended to omit the word \$50 and substitute the words *Life Membership* therefor.

Back
Numbers
of
Journal.

A good price per copy will be paid at this office for a few copies (not exceeding five) of the July-August, 1906, number of the JOURNAL MILITARY SERVICE INSTITUTION.

Change
of
Address.

Changes of Address of a Member or Associate will only be made upon his order; otherwise the Secretary cannot be held responsible for non-receipt of the JOURNAL.





Journal
of the
Military
Service
Institution
1878
1911

Governor's
Island
N. Y. H.

THE JOURNAL

JANUARY-FEBRUARY, 1911.



OME features of the JOURNAL, under consideration for early publication are noted as follows:

- I. "THE CONCEPTION OF EFFICACY OF RIFLE FIRE." By Major Antonino Cascino, Italian Artillery. Translated by Capt. F. L. Koudson, 8th U. S. Infantry.
- II. "A SHORT HISTORY OF THE LAWS GOVERNING THE ORGANIZATION OF THE REGULAR ARMY." By Capt. H. V. Evans, 8th U. S. Infantry.
- III. "THE RELATION OF THE EYES TO RIFLE SHOOTING." By Major Roderic P. O'Connor, Medical Corps.
- IV. "THE ARMY OF TURKEY." (Trans.) By Lieut.-Col. R. H. Wilson, 16th U. S. Infantry.
- V. "THE QUESTION OF A HEAVIER GUN FOR FIELD ARTILLERY AND OF AN AUTOMATIC RIFLE FOR INFANTRY." By Major T. Bentley Mott, 4th F. A., Military Attache, Paris, France.
- VI. "A REVIEW OF THE SERVICES OF THE REGULAR ARMY IN THE CIVIL WAR, '61-'65." The Infantry. By Major John C. White, U. S. A. (retired).
- VII. "A MEMORY OF OUR GREAT WAR." By Lieut.-Colonel Junius L. Powell, U. S. A. (retired).
- VIII. "TYPES AND TRADITIONS OF THE OLD ARMY."
"The Battle of Gettysburg; Annotations by General Hancock on a copy of Doubleday's Monograph." (Reproduced in fac-simile.)

THE PUBLICATION COMMITTEE invites contributions of original papers, translations and comments upon current topics. Attention is called to "Gold Medal," "Seaman" and "Reeve" prizes described elsewhere.



MEMORANDUM

THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES is an association of officers of the Army and National Guard for the promotion of the military interests of the United States. Membership entitling to a vote in the control of the INSTITUTION is open to officers of the Army, upon their own application, without ballot. Any commissioned officers of the Organized Militia may become Associate Members by a ballot of the Executive Council upon their own application; all other persons of good repute, including enlisted men of the National Guard, are eligible to Associate Membership, by ballot upon a written application endorsed by a Member or Associate Member of the INSTITUTION.



MEMBERSHIP comprises eligibility to compete for the Gold Medal and other annual prizes of the INSTITUTION; subscription to the bi-monthly JOURNAL; admission to the Museum and the use of books composing the Military Section of the New York Public Library, which, by a pending arrangement and prescribed rules, may be loaned to Members or Associates of the MILITARY SERVICE INSTITUTION only. Annual subscription \$2.50. Life Membership \$50.



THE JOURNAL of the MILITARY SERVICE INSTITUTION is the only bi-monthly magazine in the United States, controlled exclusively by officers of the Army, which is devoted to the interests of all branches of the military service, and is indispensable to the complete professional equipment of military students.

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Corresponding Member of Council for the Philippines.

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Adjutant General Philippines Division.



Gold Medal—1910.

First Prize—Gold Medal, \$100 and Life Membership.*

Second Prize—Silver Medal, Honorable Mention and \$50.*

I.—The following is published for all concerned:

Resolved, That a Prize of a Gold Medal, together with \$100 and a Certificate of Life Membership, be offered annually by THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES for the best essay on a military topic of current interest, the subject to be selected by the Executive Council, and a Silver Medal and \$50 to the first honorably mentioned essay. Should either prize be awarded more than once to the same person, then for each award after the first, a *Clasp* shall be awarded in place of the medal.*

1. *Competition to be open to Members and Associate Members only.*

2. Each competitor shall send three copies of his essay in a sealed envelope to reach the Secretary *on or before January 1, 1911*. The essay must be strictly anonymous, but the author shall adopt some *nom de plume* and sign the same to the essay, followed by a figure corresponding with the number of pages of MS.; a sealed envelope bearing the *nom de plume* on the outside and enclosing full name and address, should accompany the essay. This envelope to be opened in the presence of the Council after the decision of the Board of Award has been received.

3. The prize shall be awarded upon the recommendation of a Board consisting of three suitable persons chosen by the Executive Council, who will be requested to designate *the essay deemed worthy of the prize*; and also in their order of merit those deserving of honorable mention.

In determining the essay worthy of the prize, the Board will be requested to consider its professional excellence, usefulness and valuable originality, as of the first importance, and its literary merit as of the second importance. Should members of the Board determine that no essay is worthy of the prize, they may designate one or more essays simply as of honorable mention; in either case, they will be requested to designate one essay as first honorable mention. Should the Board deem proper, it may recommend neither prize nor honorable mention. Should it be so desired, the recommendation of individual members will be considered as confidential by the Council.

It is suggested that the members of the Board of Award consider it a part of their duty to invite attention to phrases of an otherwise acceptable paper which, in their judgment serve to weaken the effect of the argument of the writer.

4. The successful essay shall be published in the Journal of the Institution, and the essays deemed worthy of honorable mention shall be read before the Institution, or published, at the discretion of the Council, which reserves the right to publish any other essay submitted for a prize, omitting marks of competition.

5. Essays must not exceed ten thousand words, or twenty-five pages of the size and style of the JOURNAL (exclusive of tables), nor contain less than five thousand words.

*Separate subjects for 1910 see following pages.

Annual Prizes.

Gold Medal Prize, 1910.

GOLD MEDAL, \$100, AND LIFE MEMBERSHIP

FOR THE BEST ESSAY ON

"What measures should be adopted for effective prevention of unsanitary conditions in the early stages of volunteer camps in time of war?"

Board of Award:

Brig.-Gen. W. M. GRAHAM, U. S. A. (Retired).

Lieut.-Col. J. R. KEAN, Medical Corps.

Lieut.-Col. D. D. GAILLARD, Corps of Engineers.

Silver Medal Prize, 1910.

SILVER MEDAL, \$50, AND HONORABLE MENTION

FOR THE BEST ESSAY ON

"How far, in time of peace, should the authority of the United States be further extended over the organized militia of the various states and territories?"

Board of Award:

Brig.-Gen. T. J. STEWART, Adjutant-General, Pa.

Bt. Brig.-Gen. W. B. HOTCHKIN, N. G., N. Y.

Lieut.-Col. S. E. SMILEY, Adjutant-General, D. C. M.

For rules governing the competitions, see "Rules for Gold Medal, 1910," page 470.

Annual Prizes.

THE SEAMAN PRIZE, 1910.

(Founded by Major L. L. Seaman, M.D., LL.D., late Surgeon, U. S. V.)

ONE HUNDRED DOLLARS.

For best essays on subjects selected by Major Seaman and approved by Council; competition open to all officers and ex-officers of Army, Navy, Marine Corps, Marine Hospital Service, Volunteers or National Guard; in other respects same as Gold Medal prize except that essays are limited to 15,000 words, and are due December 1.

Subject:—"How can auto-intoxication*, that rarely recognized disease, which has directly or indirectly caused more invalidism and mortality in the United States Army than all other pathogenic causes combined, be prevented?"

NOTE—The above subject is worded exactly as written by Dr. Seaman. While the Council of the MILITARY SERVICE INSTITUTION is not prepared to indorse or deny the opinion of Dr. Seaman, the importance of the eradication of this cause of non-efficiency among our soldiers cannot be insisted upon too emphatically.

Board of Award: WILLIAM M. POLK, M.D., Dean Med. School, Cornell University; Colonel LOUIS M. MAUS, M.C., Chief Surgeon, Department of the Lakes; Lieut.-Colonel WILLIAM H. ARTHUR, M.C., Walter Reed General Hospital, D. C.

THE REEVE MEMORIAL PRIZE, 1910.

(In Memory of the late Bvt. Brig.-Gen. I. V. D. Reeve, U.S.A.)

SIXTY DOLLARS AND CERTIFICATE OF AWARD.

To be awarded annually upon the recommendation of a Board of three suitable persons for the best short paper upon a subject of general interest to the Service, selected by the Council. Competition open to the Army, Navy, Marines and National Guard. Papers to be submitted not later than May 1, 1911, and to contain not more than 4500 nor less than 3500 words. Conditions, in other respects, to be the same as for the Gold Medal Prize.

Subject:—"Is the present system of detail to Staff Departments conducive to the discipline and efficiency of the Army? Should it be revised?"

Board of Award:—Brig.-Gen. WILLIAM CROZIER, U. S. A.; Brig.-Gen. TASKER BLISS, U. S. A.; Col. ALFRED C. SHARPE, 23d Infantry.

*Self-poisoning by toxic matters generated within the intestinal canal or other parts of the body.

Publisher's Department.



C. G. Conn's immense factory, where most of the musical instruments used in the United States Army and Navy bands were made, was totally destroyed by fire May 22, 1910, and for a moment it looked like an irreparable disaster, but with indomitable courage this famous manufacturer overcame all obstacles, and in less than ten weeks from the date of the fire a new, larger and better-equipped factory was erected to take the place of the old one destroyed by the fire. This new factory is equipped with the most modern machinery and appliances, new and perfected systems have been inaugurated, and as Mr. Conn's friends predicted, better instruments are produced in the new factory than under the old régime.

The superiority of the *Conn Instruments* is recognized not only by the bandmasters and musicians of the Army, but also by the commissioned officers and enlisted men. Among the latter, many unofficial bands have been organized, having been stimulated to that course by the excellent music produced by the regular bands of the various regiments, nearly all of whom have been equipped with instruments from this famous factory.

It was during the war with Spain that the *Conn Instruments* first found favor among army bandmasters and musicians on account of their durable and serviceable qualities, combined with their excellence of tone, tune and mechanism. Since that time their popularity has increased wonderfully.

A portrait of the new factory is herewith presented. A new catalogue has been issued, which Mr. Conn will gladly send free of charge to any applicant who may be interested.

THE marketing of a new device for the protection of the ears during gun-firing the *Elliott Ear Protector* makes the following remarks opportune:

Complex in arrangement, very delicate in structure and packed away from harm in a bony case, the temporal bone, are the membranes, little bones, tiny sand-like particles and microscopic nerve endings of the auditory nerve which constitute the essential organs of the ear. Though the ear is spoken of as an individual and separate organ, still it might better be thought of as the brain's hand, so intimate is the connection, and added to which is the fact that the brain actually feels the outside world through the ear. Doubt no longer exists in the minds of scientific men that it is motion of the particles (molecules) of air which the brain feels through the ear and knows as sound.

Where there is motion there is force, so physics teaches, and it is this fact of force acting directly upon the ear that deserves consideration. Flinching, headache, ringing in the ears or head, and deafness are the well-known effects of gun reports, and all are due either to the direct or reflex action of the unusual force which is permitted to enter the ear at the time the gun is fired.

Need of an ample and complete protection has long been felt by all who were connected directly with target-practice, and judging from personal and official reports the *Elliott Ear Protector* meets the necessity perfectly.

Since September, 1904, these ear protectors have been in use at the Sandy Hook Proving Grounds, and upon reports from there and other forts the Board of Ordnance and Fortification voted for adoption, and during March last the New York arsenal purchased 4410 pairs for distribution among the 126 companies of coast-artillery.

The *Elliott Ear Protector* merits the consideration of every officer of the service. All who are interested in guns and shooting should write the manufacturer, whose advertisement appears elsewhere in this JOURNAL, who will mail free upon request a brief and interesting pamphlet devoted to a description of the *Elliott Ear Protector* and the claims made for it.

A GOOD RESULT.

UNDER the operation of the new Pure Food Laws, baking powders now generally bear on the labels a statement of the ingredients. This is of utmost importance because of the harmful ingredients used in many cases.

Royal Baking Powder is known to be the only baking powder made of Royal Grape Cream of Tartar, and this no doubt explains its greatly increased sale here.

Careful housekeepers are taking advantage of the protection which the laws afford, and are examining all the reading matter on the back of the label before adopting any brand for use in the home.

When in place of the words cream of tartar the words "alum," "aluminum" or "phosphate of lime" appear among the ingredients, they heed the warning and avoid baking powders containing these substitutes.

NOV.-DEC.

No. CLXVIII.

JOURNAL OF THE MILITARY SERVICE INSTITUTION

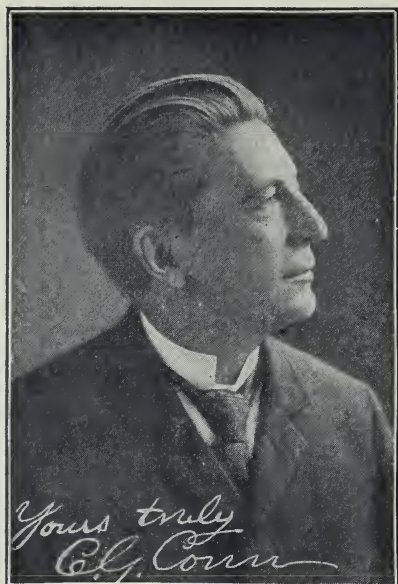
1878

1910

PRACTICAL MILITARY INSTRUCTION
✦ PLAN FOR PROMOTION ✦ EM-
PLOYMENT OF MACHINE GUNS ✦
RIGHTS OF POST COMMANDERS ✦
GERMAN ARMY ✦ MUSINGS ✦ IN-
FANTRY ENTRENCHING TOOL ✦
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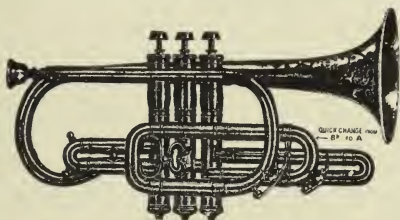
Listerine Dermatic Soap.—A bland, unirritating and remarkably efficient soap designed to meet the most exacting requirements of a saponaceous detergent. It is of especial value in preventing cutaneous affections.

Listerine Talcum Powder.—An excellent absorbent and deodorant, particularly adapted for use after shaving, and indispensable in the nursery to prevent soreness and chafing.

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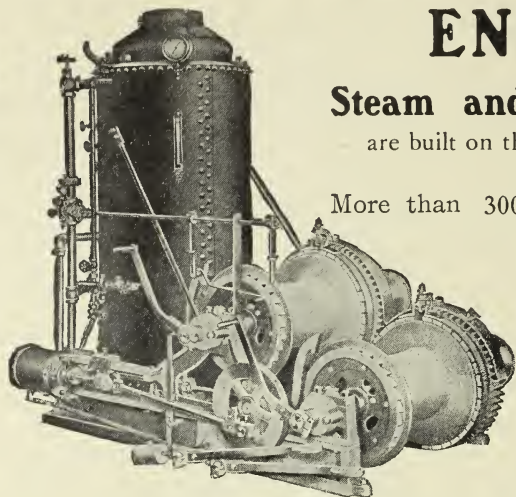
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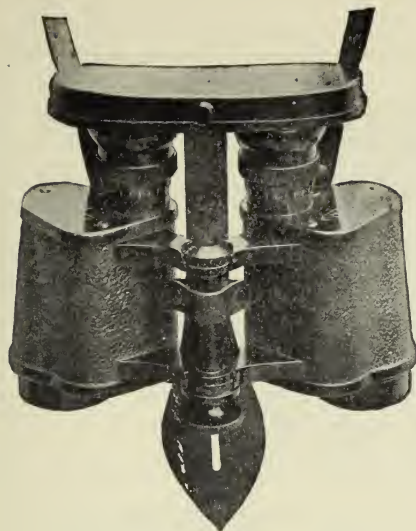
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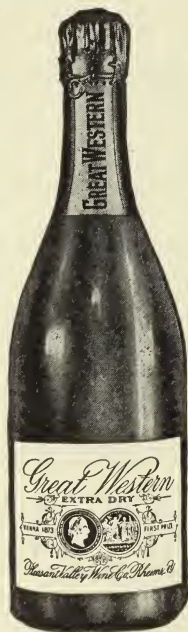
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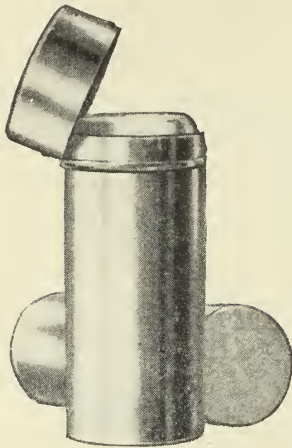
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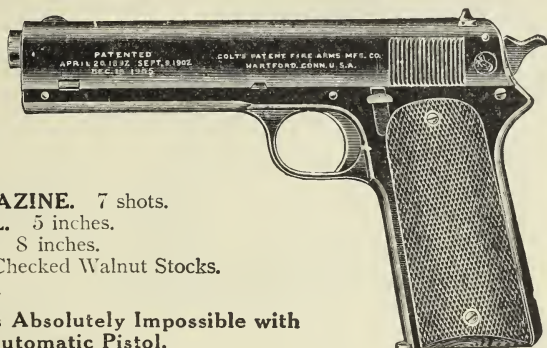
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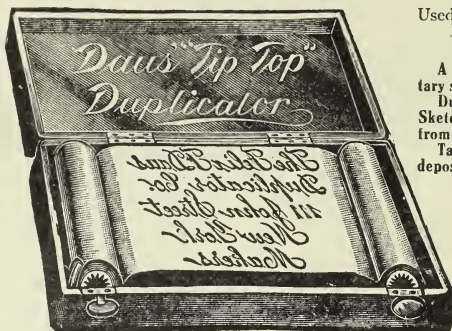
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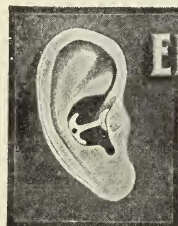
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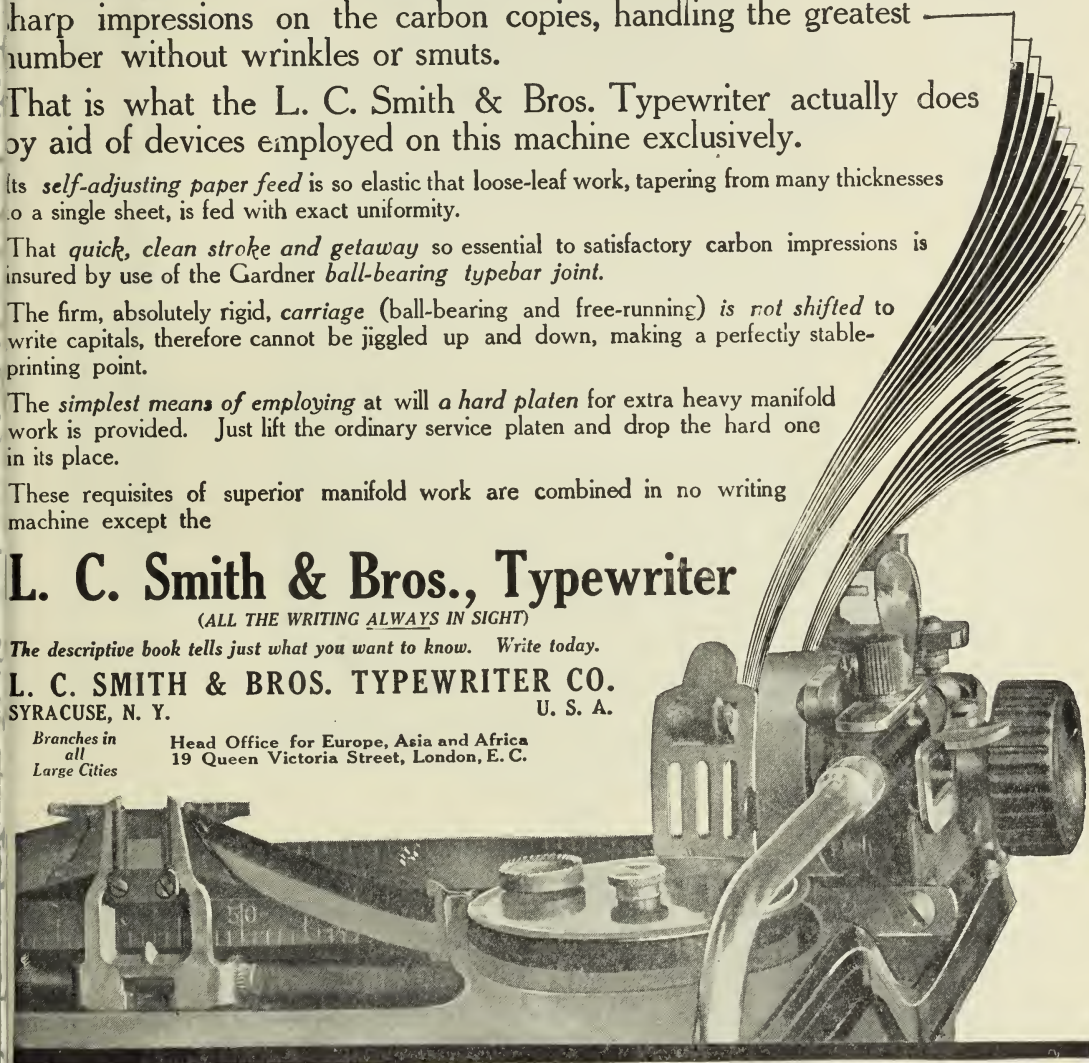
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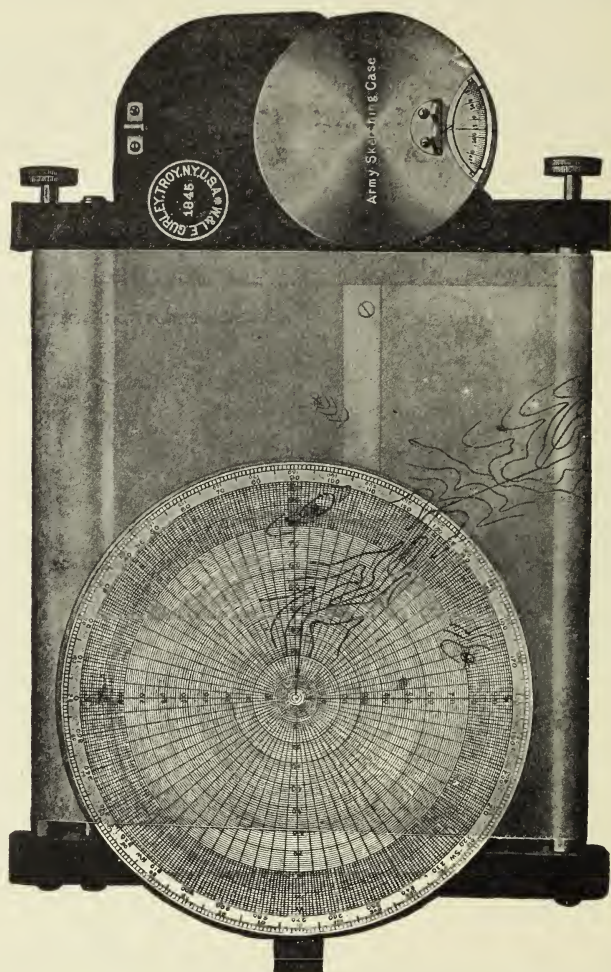
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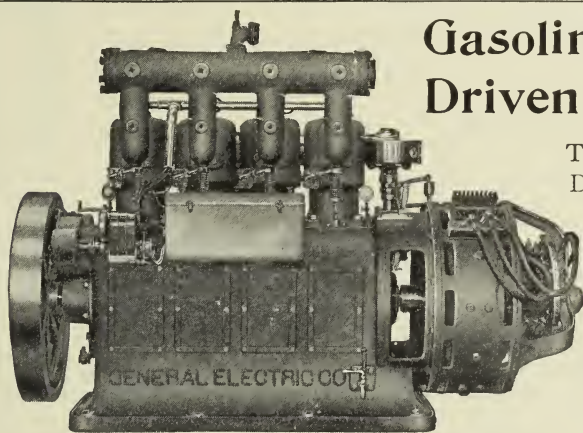
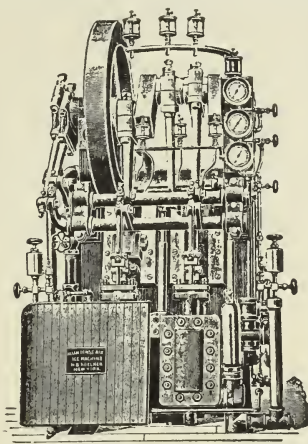
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TURN TABLES

TRANSFER TABLES

HORLICK'S MALTED MILK

The Original and only Genuine

A delicious food-drink for all ages—agreeable to the taste, nutritious and invigorating, easily digested, beneficial for the dyspeptic, the weak, and the convalescent; retained by the stomach when other foods are rejected, even in car or sea sickness.

It upbuilds the infant, sustains the adult, invigorates the aged, and nourishes the invalid.

Pure milk and the soluble extract of malted grains in powder form. A nourishing food drink is prepared in a moment, by simply stirring in water. A glassful, hot, before retiring, induces refreshing sleep. Also, in Lunch Tablet Form, with chocolate. Very convenient, since a few dissolved in the mouth at intervals, will be found very satisfying to the hungry or fatigued. An excellent substitute for candy for growing children.

Samples upon request.

HORLICK'S MALTED MILK CO., Racine, Wis.

MONTREAL, Canada

LONDON, England

ROYAL Baking Powder

The only Baking Powder made
with Royal Grape Cream of Tartar
—made from grapes—

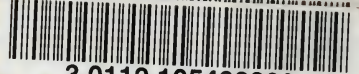
Insures healthful and
delicious food for every
home—every day

Safeguards your food against
alum and phosphate of lime



Royal Baking Powder has not its counterpart at home or abroad. Its qualities, which make the bread more healthful and the cake of finer appearance and flavor, are peculiar to itself and are not constituent in any other leavening agent.

UNIVERSITY OF ILLINOIS-URBANA



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